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A Duke Energy Company

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July 25, 2001

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Corporation
Catawba Nuclear Station, Unit 2
Docket Number 50-414
Response to Request for Additional Information for Revision of Unit 2 Reactor Coolant System Cold Leg Elbow Tap Flow Coefficients

By letter dated March 8, 2001, Duke Energy Corporation submitted a license amendment request to the Unit 2 Reactor Coolant System Cold Leg Elbow Tap Flow Coefficients. By telecon on July 9, 2001, the Staff requested additional information associated with the submittal. Enclosed is the response to the Staff questions.

Note that while the March 8, 2001, submittal constitutes a formal license amendment request, there are no associated Technical Specification changes required.

This correspondence does not contain any commitments.

Pursuant to 10 CFR 50.91, a copy of this proposed amendment request is being sent to the appropriate State of South Carolina official.

Inquiries on this matter should be directed to G.K. Strickland at (803) 831-3585.

Very truly yours,

Gary R. Peterson

GKS/s
Attachment

A001

Gary R. Peterson, being duly sworn, states that he is Site Vice President of Duke Energy Corporation; that he is authorized on the part of said corporation to sign and file with the Nuclear Regulatory Commission this amendment to the Catawba Nuclear Station Facility Operating License Number NPF-52; and that all statements and matters set forth herein are true and correct to the best of his knowledge.

Gary R. Peterson, Site Vice President

Subscribed and sworn to me: July 25th, 2001
Date

Douglas M Black
Notary Public

My commission expires: October 24th, 2001
Date

SEAL

xc (with attachments):

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Reactor Coolant System Cold Leg Elbow Tap Coefficients
Attachment

1) **Please provide quantitative information comparing Prairie Island elbow tap measurements to leading edge flowmeter measurements, showing the stability of elbow tap ΔP flow measurements over long periods of time and over a range of flow rates.**

Response: The comparison of the elbow tap measurements to the leading edge flow meter measurements is still under development as discussed with the NRC Project Manager.

2) **Please provide representative time histories of elbow tap ΔP's and hot leg temperature readings at the instrument sampling frequency used for a calorimetric test.**

Response: Tables 1 through 3 provide Catawba Unit 2 hot and cold leg temperature and elbow tap ΔP data at the sampling frequency representative of that used for a calorimetric test. The data presented consists of 10 minutes of data (calorimetric tests normally use 20 minutes) at 2 second intervals obtained with Catawba Unit 2 at 100% power. Note: this is not actual test data, but data representative of that used for a test.

3) **Please provide information describing how the average hot leg temperature is computed from the RTDs.**

Response: To produce a narrow range hot leg temperature indication for the reactor protection system and rod control the three hot leg temperature indications are averaged via a Revised T-hot Averaging Scheme (RTAS). RTAS was developed because short-term aperiodic temperature fluctuations were impacting the calculated average T-hot, which in turn impacts the indicated values of Tavg, ΔT, and ultimately reduces the margin to the Overpower (OPΔT) and Overtemperature (OTΔT) ΔT trips. This reduction in margin became significant at McGuire's Unit 1 causing a turbine runback to occur. By assigning different weighting factors to the three RTD measurements, the effect of the short-term fluctuations can be reduced. RTAS is based on assigning the smallest weight to the noisiest RTD when calculating the average T-hot. Generally, the noisiest RTD has been found to be the coldest. A small weight on the coldest RTD requires a high weight on the hotter RTDs, resulting in a higher indicated average T-hot. The higher indicated T-hot average is conservative for rod control and the OTΔT and OPΔT trip functions. RTAS is based on the following assumptions:

1. The weighted average T-hot is greater than or equal to the unweighted average T-hot with a maximum difference of ≤ 2.0°F.
2. The noisiest RTD signal (typically the coldest) remains the noisiest for the entire cycle.
3. Surveillance to confirm (1) and (2) is performed on a periodic basis during the cycle.

Westinghouse performed an analysis to determine the optimum weighting factors based on plant data from McGuire Unit 1 and Catawba Unit 2. The data consisted of three hot leg RTDs, the cold leg RTD, various points within the OTΔT and OPΔT protection system for each loop, and other plant parameters. The data was collected during plant operation using the WESTRAC system. By replaying RTD data through a simulation of the trip systems, a comparison of the trip margin improvement was made.

Based on the criteria above, it was determined that weighting factors of 0.2, 0.6, and 0.2 should be used, resulting in a typical recovery of about 3.3% of the trip margin lost during a

typical short-term temperature fluctuation . This weighting produces an increase in the indicated T-hot of ≈ 0.9°F during normal plant operation. This change was implemented via a 10CFR50.59 evaluation in May of 1992.

The actual weighting factors are established and confirmed via testing on a quarterly basis.

For use in a periodic calorimetric the three individual hot leg temperature channel indications are obtained in runs of approximately 20 minutes. Note that these temperatures are obtained for each of the hot leg temperature channels upstream of any RTAS weighting. These data points are then averaged to produce a time averaged hot leg temperature for each channel. These three time averaged channel indications are then averaged together to produce an averaged hot leg temperature indication for each loop.

4) **Please provide information about how it is determined that instrument drift has occurred and how the flow transducers are recalibrated after instrument drift has occurred.**

Response: Each of the flow transmitter instrument loops receives a Channel Calibration (CC) on an 18-month frequency. Additionally, the protection setpoints are verified via a Channel Operational Test (COT) once a quarter. The CC verifies the full calibration of the instrument loop from the field transmitter all the way through all final end devices. The COT verifies the setpoints via injection of test signals at the beginning of the 7300 Process Protection cabinets, and thus doesn't include the transmitter.

The CC and COT procedures provide 'Desired' calibration points and an allowable range about the desired calibration points. The allowable range is the calibration setting tolerance, and it is specified to ensure the desired accuracy is achieved. The instrument procedures require the maintenance technicians to record the as-found and as-left calibration values. No instrument is allowed to be left outside of the allowable range. This ensures that any drift, temperature effect, or miscellaneous calibration error that has occurred since the last calibration is eliminated. If the instrument can not be brought within the calibration limits, then a corrective work order is generated to have the instrument loop repaired.

Catawba uses an Out of Tolerance (OOT) tracking system whereby the maintenance technicians forward a copy of all calibration data sheets to engineering for evaluation if they exceed a limit specified by the subject procedure. Engineering then evaluates the out of tolerance report to examine for repeat occurrences, excessive drift problems, non-linearities, etc. The evaluation process can then result in additional actions taking place, such as more frequent monitoring, repeating of calibration, repair/replacement of components, etc. As a group, the reactor coolant flow transmitters and the associated electronic cards have been very reliable.

5) **Please provide information about how the replacement instruments were recalibrated in the McGuire data.**

Response: When a transmitter has been found outside its drift tolerance, it is recalibrated to within this tolerance. This usually appears as a substantial ΔP increase or decrease for one elbow tap transmitter during a calorimetric, with a subsequent calorimetric ΔP showing the same transmitter returning to an expected value. At McGuire Unit 1 in December 1987 all of the original Veritrak transmitters were replaced with Barton transmitters which resulted in a jump in elbow tap differential pressures as seen in the ΔP data. The original transmitters were susceptible to drift and were constantly found outside their drift tolerances. When the transmitters were replaced during the EOC 4 refueling outage it was found that the original McGuire Unit 1 elbow tap transmitters were reading substantially lower ΔPs than the new elbow tap transmitters. The slight jump in each elbow tap ΔP after the December 1987 refueling outage reflects the result of this transmitter change out.

When a flow transmitter (or any protection transmitter) needs to be replaced for any reason, the following actions occur. A new transmitter is obtained, and bench calibrated in accordance with the maintenance calibration procedures. These procedures ensure that the transmitter is scaled and calibrated in accordance with the engineering specified values. For reactor coolant flow, this compensates for temperature, pressure, and static pressure span compensation. Because the static pressure zero shift is specific to a particular transmitter, steps are included to verify the characteristics at system operating pressure conditions. Since the instrument loop has response time test criteria associated with this, the transmitter is also response time tested. After installation of the transmitter in the field, the transmitter calibration is then performed again to ensure it is still within accuracy limits specified by the procedure.

6) **Please provide information about the extended periods of bad plant data in information submitted in the 1994 amendment request. Include information about what is done when it is determined that an instrument is providing inaccurate readings.**

Response: The data submitted in the 1994 amendment request was individual CNS-1 elbow tap ΔP readings for a period spanning January 1992 to October 1993. During this period of time the elbow tap ΔP indications exhibited periods where the elbow tap readings were either very low or even negative in nature. The first period is the period between July 10, 1992 and October 20, 1992. During this period CNS-1 was in a refueling outage. During these times when reactor coolant pumps are not operating the flow as indicated by the elbow taps will register as low or negative indications as seen. The second period is the period between June 12, 1993 and June 24, 1993. During this period the plant was in a maintenance outage to repair a steam extraction line.

7) **Please provide information for tube plugging and fuel pressure drop changes that have occurred since 1993. Also provide information about the ability of your analytical flow model to predict the flow changes.**

Response: See attached Figures 1 through 3. Figure 1 shows the Catawba Unit 2 flow data from startup to present. Shown are the analytical model prediction of flow, the flow based on the current elbow tap flow coefficients, and the flow based on the proposed elbow tap flow coefficients. Also shown is the number of SG tubes plugged to the current total of 1.2%. The B&W and Westinghouse fuel transitions are also indicated. This data shows that flow at Catawba Unit 2 has changed very little until the recent introduction of Westinghouse fuel.

Figure 2 shows the Catawba Unit 2 flow trends including the calorimetric based flow rate.

Figure 3 shows the McGuire Unit 1 data. The data trends show how significant hydraulic changes such as large SG tube plugging (17.5%) and SG replacement (RSG) change the plant flow data based on elbow taps and the analytical model prediction.

As shown in the Figures 1 and 3 the analytical flow model can predict flow changes quite well. However, the accuracy of any prediction is only as good as the input information to the model. As can be seen on Figures 1 & 3 the modeling changes for steam generator tube plugging is well understood and the model predicts the effects of tube plugging well compared to the actual measured data. There is an extensive history to draw on for this type of change and the effect it has on the reactor coolant flow. Other plant changes such as introduction of new fuel and steam generator replacement can be predicted well if the expected change in their pressure drops are accurately estimated. For example, on Figure 1 the flow increase prediction, using the analytical flow model, for the introduction of B&W fuel showed a much smaller increase than the measured data as shown in the elbow tap ΔP flow curve. This was largely the result of an under prediction of the pressure drop decrease across the core region when the new fuel was introduced into the core. This is generally by

design, since it was not desired to credit too high a flow in our analyses and find out later that the analysis was done at a non-conservative flow rate. When the new Westinghouse RFA fuel was introduced at the beginning of 2000, a prediction of the increase in the fuel's pressure drop due to the mixing vane grids resulted in a better prediction of flow when the new fuel was introduced into the core. In this case, it was desirable to accurately predict or slightly over predict the effects of the higher pressure drop fuel since it was important to know when the reactor coolant flow would approach the Technical Specification minimum measured flow limit. The predicted flow decrease resulted in an assessment that for Catawba Unit 2 the limit would be approached within one to two refueling cycles. It has been concluded that the analytical flow model is an accurate and valuable tool for use in trending RCS flow changes such as those described above.

8) **Concerning Figure 1, please provide information to explain variations in the plant data versus the analytical flow model prediction.**

Response: The analytical flow model is a prediction of flow based on pressure drop data and first principle calculations. The elbow tap data is plant measured data produced by the elbow tap pressure transmitters and the cold leg density calculated from the cold leg temperature indications and corrected pressurizer pressure. The elbow tap method of measuring flow eliminates the large negative impacts of the hot leg streaming but, the indication is also affected by smaller affects such as transmitter and rack component drift and streaming effects in the cold leg and it's effect on the density calculation. These effects result in small variations in the elbow tap ΔP flow indication which will not be present in the analytical flow model prediction of flow. In addition, as discussed in the response to question 7, when component pressure drop changes are under or over predicted in the analytical flow model the result will produce differences between the model and the actual measured flow. Figures 1 through 3 show that the elbow tap ΔPs are very repeatable and trend the effects of steam generator tube plugging and other RCS changes with limited variability, which is generally attributable to ΔP transmitter drift and small cold leg streaming effects.

9) **During a calorimetric procedure what amount of data is typically averaged to produce an averaged value for use in the calculation.**

Response: Plant parameters used in the calorimetric are verified to be within specific criteria to ensure stable plant conditions in the 5 minute interval just prior to performing a calorimetric procedure. The parameter data for 1 test run is then gathered at 2-second intervals over a 20 minute time period (600 data points). This 20 minutes of data is then averaged to produce the averaged plant parameters used to calculate the calorimetric flow.

10) **Concerning Figure 3, please provide information which would explain the increase in the flow difference between the elbow tap determined flow and the calorimetric determined flow at the time of steam generator replacement.**

Response: The increase in the difference between the elbow tap measured flow and the calorimetric calculated flow following the replacement of the steam generators at McGuire Unit 1 is an increase in the streaming effect. The maximum difference in the hottest to coldest hot leg RTDs was $\approx$ 11.6°F during the period prior to the replacement of the steam generators. Following replacement of the steam generators, a maximum difference in the hottest to coldest hot leg RTDs was found to be $\approx$ 13.0°F. McGuire Unit 1 has not been significantly impacted by the streaming effect prior to replacing the steam generators. However, it appears that the new steam generators with their reduced hydraulic resistance have allowed the streaming effect to increase slightly. This increase in the hot leg streaming is the reason that the calorimetric flow did not increase in direct proportion to the elbow tap indicated flow following steam generator replacement. Also, note that Figure 3 has been updated to include an additional data point for September 2000. This data point was inadvertently excluded from the Figure 3 provided during the July 9, 2001 phone call. The additional

data point for the September 2000 calorimetric shows a large increase in the calculated flow from the previous calorimetric surveillance. This jump in flow results from a correction to the calorimetric calculation. The reactor coolant pump power was inadvertently subtracted in the previous calorimetrics instead of added, as it should have been.

11) Please provide information explaining how the effects of the up-flow modification, B&W fuel, and steam generator tube plugging affect the January 1992 flow value given on Figure 3.

Response: The McGuire EOC-7 refueling outage was performed in September 1991. During this outage three changes in the hydraulics of the RCS were made, the reactor vessel downcomer up-flow modification, the first batch of B&W fuel, and 82 steam generator tubes were plugged. The up-flow modification changed the flow fractions in the reactor vessel downcomer and through the core slightly increasing the pressure drops in these regions of the reactor coolant system. The analytical flow model predicted a decrease in flow of approximately 400 gpm (or $\approx$ 0.1% flow) due to this change.

Steam generator tube plugging of 82 tubes also occurred during this refueling outage. The analytical flow model predicted a decrease in flow of approximately 380 gpm (or $\approx$ 0.1% flow) due to this change.

The introduction of the first batch of B&W fuel was expected to increase flow due to a decreased overall fuel pressure drop. The analytical flow model predicted an increase in flow of approximately 170 gpm (or $\approx$ 0.05% flow) due to this change.

The sum total of these changes results in a prediction of an overall flow decrease of approximately 610 gpm (or $\approx$ 0.15% flow). However, the elbow tap flow result indicates that a net flow increase of $\approx$ 0.40% flow was realized due to the new fuel. The difference between these flows is the under predicted pressure drop estimates used in the analytical flow model as described in the response to question 7. This resulted in an analytical flow model calculated overall flow decrease when the measured elbow tap flow indicated a overall flow increase.

12) From the data package dated April 13, 1994, which summarizes a February 10, 1994 meeting on RCS flow measurement methodology, Table Q492.7-3 gives a value of ± 0.58% power as an uncertainty for the total secondary thermal power uncertainty. Does this value represent the current uncertainty for the total secondary thermal power uncertainty? If not, what is the current value for the total secondary thermal power uncertainty? Also, provide confirmation of the uncertainty value used for the elbow tap calibrations.

Response: The value in the data package is not the current value for the total secondary power uncertainty. Table Q492.7-3 was provided as an example of the methodology used to calculate the total RCS flow measurement uncertainty. The values in the table reflect the individual uncertainties determined by Westinghouse at the time of plant startup. The current total secondary thermal power uncertainty is calculated to be ± 1.52 % Rated Thermal Power (RTP). The current allowance for total secondary thermal power uncertainty is ± 2.0 % RTP. The elbow tap ΔP transmitters are verified every cycle to be within a tolerance of ± 0.5 % ΔP span. This calibration allowance is utilized to calculate a total RCS flow indication uncertainty of ± 1.88 % flow. This uncertainty is for the indication of flow on the Operator Aid Computer (OAC). The current allowance for RCS flow uncertainty is ± 2.2 % flow as described in the Bases for Technical Specification 3.4.1. The calibration tolerance for the elbow tap transmitter is also utilized to calculate a loss of flow reactor trip setpoint uncertainty of ± 3.42 % flow per loop. The current uncertainty allowance for the loss of flow setpoint is ± 4.50% flow per loop.

13) The elbow tap coefficients have been assumed to be constant and unchanging values. Please provide justification as to why the coefficients will not change over the life of the plant.

Response: Elbow tap flow meters are a form of centrifugal meter, using the momentum forces developed by the change in flow direction. The principal parameters that determine the ΔP for a specified flow are the radius of curvature of the elbow and the diameter of the flow channel through the elbow. Experiments on elbow meters have determined that the flow measurements are not affected by differences in surface roughness and have a high degree of repeatability.

Specific phenomena that have affected other types of flow meters, or that might affect the elbow meters in the RCS application, have been evaluated to determine whether any of these phenomena would affect elbow meter repeatability. In addition, data from an operating plant equipped with a highly accurate flow meter has been compared with the elbow meter measurements at that plant to demonstrate elbow meter repeatability. The phenomena that were evaluated include venturi fouling effects, elbow meter dimensional changes, and upstream velocity distribution effects.

Deposits, called fouling, that affect surface roughness and throat area, affect venturi type flow meters. The fouling is apparently caused by electrochemical ionization plating of copper and magnetite particles in the feedwater, a process associated with the large velocity increase as the flow approaches the venturi throat. This condition is not present in an RCS elbow; there is no large change in cross section to produce a velocity increase and ionization, and changes in surface roughness do not affect the elbow flow measurement.

The elbow meter will not be susceptible to dimensional changes due to pressure and temperature since these temperatures and pressures would be approximately the same (full power conditions) each time flow measurements are made. Erosion of the elbow surface is unlikely since stainless steel is used, and the velocities are not large (42 fps) relative to velocity known to cause erosion. The effects of any dimensional change or of erosion could only affect flow by changing elbow radius or pipe diameter, both large relative to any possible dimensional change. Therefore, the elbow meter is considered to be a highly stable flow measurement element.

The velocity distribution entering the elbow meter will be skewed by the upstream 40° elbow on the steam generator outlet nozzle, and the velocity distribution entering the steam generator outlet nozzle may be skewed due to its off-center location relative to the tube sheet. These geometric effects will remain constant through a fuel cycle, so the elbow meter ΔP would not change.

Steam generator tube plugging is usually randomly distributed across the tube sheet, so the velocity distribution approaching the outlet nozzle would not change. The velocity distribution could change if extensive tube plugging occurred in one location on the tube sheet, but the change would not be transmitted through the outlet nozzle to the elbow meter. The velocity within the steam generator plenum is small (6 fps) compared to the downstream cold leg pipe velocity. This large change in flow area would significantly decrease or flatten any upstream velocity gradient. Therefore, any tube plugging, even if asymmetrically distributed, would not affect the elbow flow measurement repeatability.

Flow measurement comparisons (see response to question 1) have been conducted at Prairie Island Unit 2, which has other highly accurate means of RCS flow measurement. The leading edge flow meter (LEFM) installed at this plant provided a means of confirming repeatability of elbow meters. These comparisons were performed over a period that saw many significant changes in system hydraulics and the elbow meter measurement changes were found to be in agreement with those of the LEFMs.

14) Explain how the presence of hot leg streaming and its affect on Reactor Coolant System flow affect the UFSAR Chapter 15 transient and accident analyses.

Response: Hot leg streaming exists when the three hot leg RTDs in a loop indicate different temperatures. This is due to incomplete mixing of the water flowing between the core exit, where the water temperature has a distribution associated with the core radial power distribution, and the RTD location. Typically the indicated hot leg temperatures are higher than the true average. At Catawba the three hot leg RTDs in each loop are averaged to obtain one value for T-hot in each loop. This averaging method includes weighting factors (RTAS) to suppress fluctuations in the average value of T-hot that result from variations in the coldest of the three RTDs. The weighting factors result in a more stable T-hot behavior and a higher value of T-hot, which is conservative.

The average value of T-hot in each loop is used along with the T-cold RTD value in each loop to obtain a ΔT value for each loop. The OPΔT and OTΔT trip functions compare the current value of ΔT to the reference value of ΔT (ΔT_0). For the purposes of this discussion, the dynamic compensation of these signals and the other factors that affect the trip function are irrelevant and are not included for simplicity. The reference value of ΔT_0 is the full power ΔT measured on a loop specific basis. This value is determined quarterly and is re-set to the current value if it deviates from the previous value by 0.6°F. In this manner changes in hot leg streaming are accounted for.

Many of the UFSAR Chapter 15 transients and accidents rely on a reactor trip on either the OPΔT or the OTΔT reactor trip functions. The uncertainty in these trip functions includes an allowance for up to a 14°F difference in the three hot leg RTDs temperature indications. A reactor trip occurs when the setpoint is reached in two of the four channels. Due to the loop transport delay time and the response time of the RTDs, the ΔT trip functions are only relied on for the slower plant transients.

The elbow tap method for flow measurement has conservatism due to the inclusion of calorimetric data in which hot leg streaming has resulted in an under prediction of flow. That flow margin is not credited in the UFSAR Chapter 15 analyses.

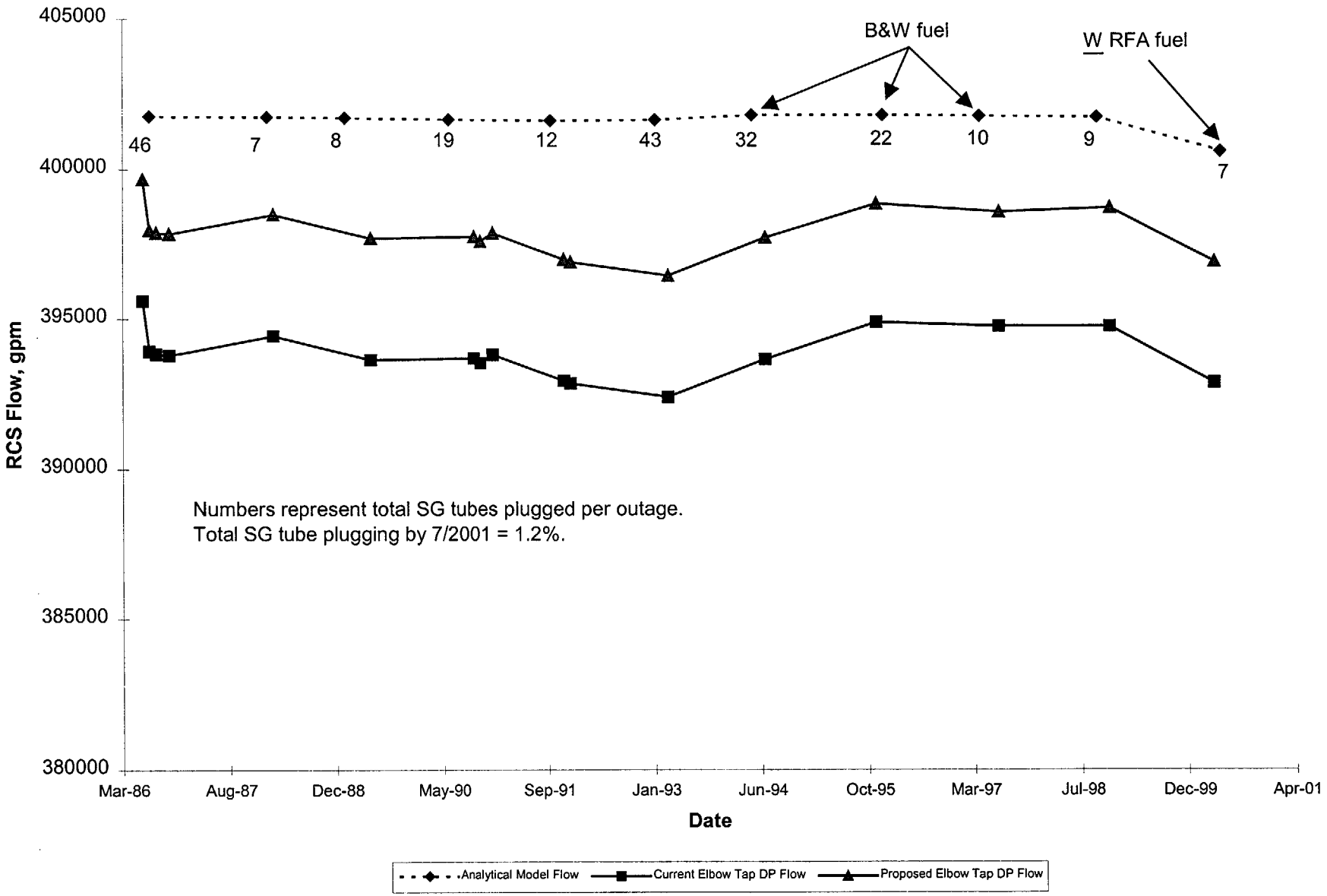
Catawba Unit-2
405000
400000
395000
390000
385000
380000
RCS Flow, gpm
B&W fuel
W RFA fuel
46
7
8
19
12
43
32
22
10
9
7
Numbers represent total SG tubes plugged per outage.
Total SG tube plugging by 7/2001 = 1.2%.
Mar-86
Aug-87
Dec-88
May-90
Sep-91
Jan-93
Jun-94
Oct-95
Mar-97
Jul-98
Dec-99
Apr-01
Date
Analytical Model Flow
Current Elbow Tap DP Flow
Proposed Elbow Tap DP Flow

Figure 1

Catawba Unit 2 RCS Flow History

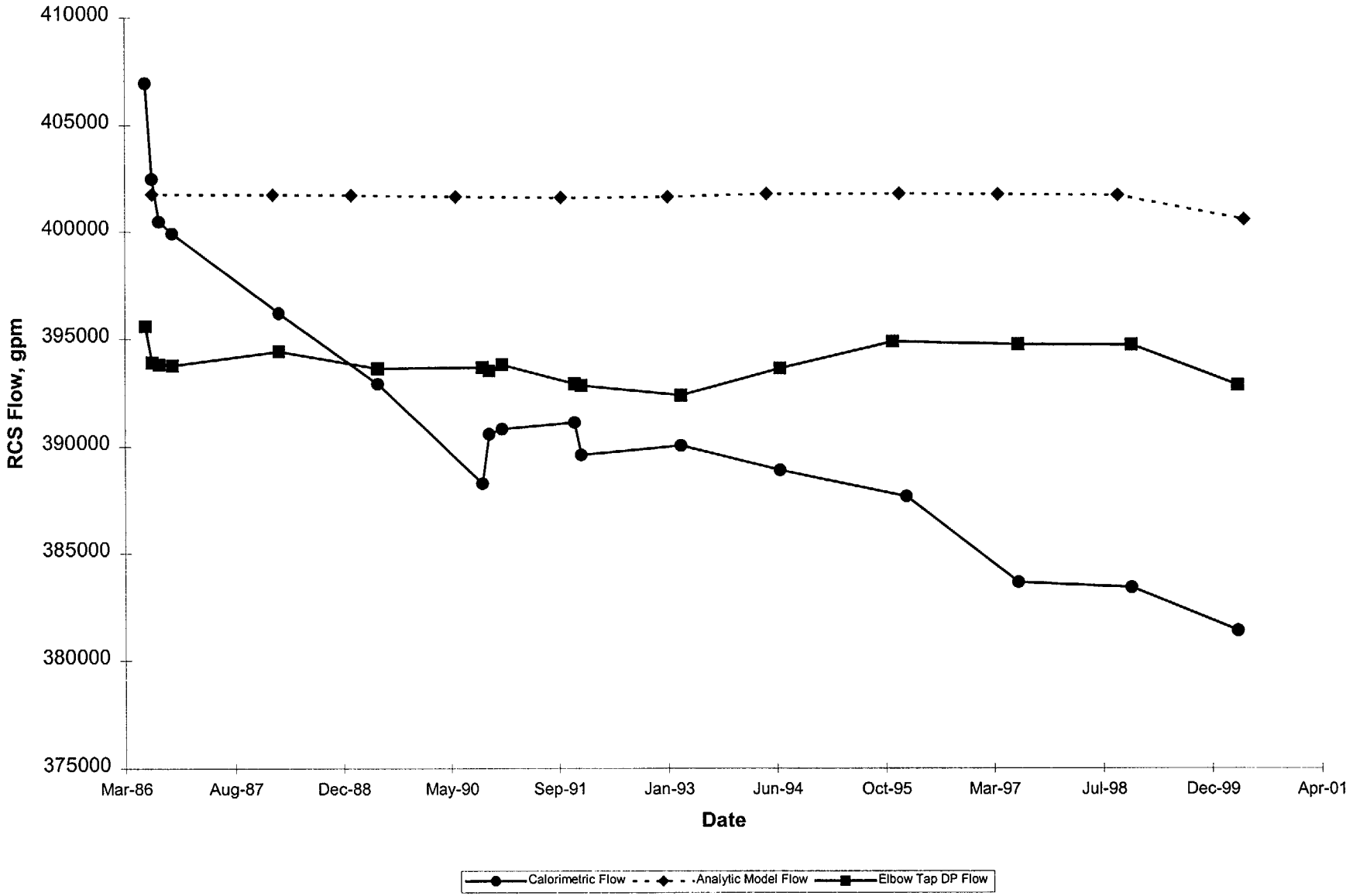

Figure 2

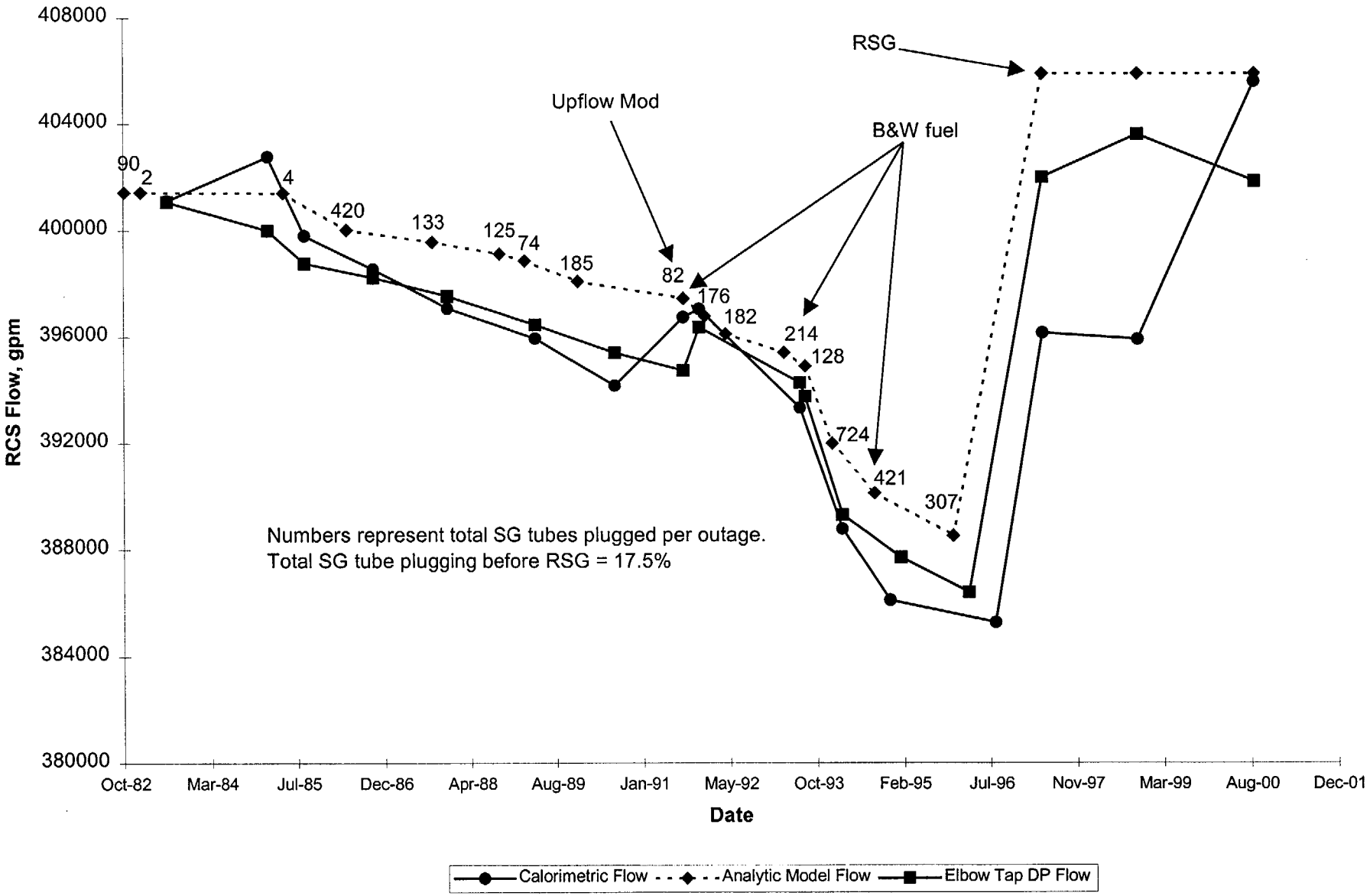
McGuire Unit-1
RCS Flow, gpm
408000
404000
400000
396000
392000
388000
384000
380000
Oct-82
Mar-84
Jul-85
Dec-86
Apr-88
Aug-89
Jan-91
May-92
Oct-93
Feb-95
Jul-96
Nov-97
Mar-99
Aug-00
Dec-01
Date
RSG
Upflow Mod
B&W fuel
90
2
4
420
133
125
74
185
82
176
182
214
128
724
421
307
Numbers represent total SG tubes plugged per outage.
Total SG tube plugging before RSG = 17.5%
Calorimetric Flow
Analytic Model Flow
Elbow Tap DP Flow

Figure 3

Table 1
Catawba Unit 2 Loop Hot Leg Temperature Data

		Loop A T-Hot, deg F			Loop B T-Hot, deg F			Loop C T-Hot, deg F			Loop D T-Hot, deg F		
		A1	A2	A3	A1	A2	A3	A1	A2	A3	A1	A2	A3
DATE	TIME	C2A0435	C2A0440	C2A0538	C2A0857	C2A1468	C2A1474	C2A1480	C2A1486	C2A1421	C2A1427	C2A1433	C2A1439
17-Jul-01	17:34:10	614.8	608.9	615.4	620.0	616.4	615.2	616.2	610.4	615.2	618.2	616.1	614.1
17-Jul-01	17:34:12	614.8	608.8	615.2	619.8	616.5	615.2	616.5	610.8	615.0	618.3	616.2	614.1
17-Jul-01	17:34:14	614.8	608.5	615.4	619.6	616.5	615.5	616.4	610.6	615.2	618.3	615.9	614.4
17-Jul-01	17:34:16	614.6	608.9	615.4	619.6	616.2	613.9	616.1	610.0	615.7	618.3	615.5	614.4
17-Jul-01	17:34:18	614.5	608.7	615.5	620.0	616.6	614.3	616.2	610.0	615.5	618.3	615.8	614.6
17-Jul-01	17:34:20	614.6	608.6	615.6	619.9	616.3	615.1	616.5	610.6	615.4	618.3	616.0	614.6
17-Jul-01	17:34:22	614.5	608.8	615.5	619.9	616.2	615.3	616.6	610.0	615.5	618.3	616.1	614.2
17-Jul-01	17:34:24	614.6	609.2	615.4	619.7	616.4	616.1	616.7	609.9	615.6	618.3	616.1	614.0
17-Jul-01	17:34:26	614.7	608.6	615.4	619.9	616.3	615.6	616.4	610.3	615.9	618.3	615.9	613.7
17-Jul-01	17:34:28	614.7	608.4	615.4	619.9	616.8	615.2	616.5	610.2	615.8	618.4	616.0	614.0
17-Jul-01	17:34:30	615.0	608.7	615.5	619.5	616.8	615.8	616.6	610.0	615.8	618.3	615.9	614.4
17-Jul-01	17:34:32	614.8	609.1	615.2	619.8	616.6	615.5	616.4	610.4	615.6	618.0	616.1	614.7
17-Jul-01	17:34:34	614.6	608.9	615.2	619.9	616.4	615.9	616.4	609.9	615.3	617.9	616.2	614.4
17-Jul-01	17:34:36	614.7	608.9	615.3	619.5	616.6	615.1	616.5	609.4	615.6	618.4	616.2	613.7
17-Jul-01	17:34:38	614.6	609.1	615.5	619.7	616.6	614.9	616.6	609.3	615.9	618.2	616.1	613.1
17-Jul-01	17:34:40	614.9	609.1	615.6	620.1	616.5	614.6	616.8	609.5	615.8	618.3	616.2	612.9
17-Jul-01	17:34:42	614.8	608.8	615.2	620.0	616.6	615.7	616.7	609.5	615.8	618.3	616.4	613.8
17-Jul-01	17:34:44	614.5	608.6	615.2	619.8	616.7	616.0	616.7	610.2	615.5	618.4	616.1	614.3
17-Jul-01	17:34:46	614.8	608.4	615.3	619.8	616.7	615.8	616.9	610.4	615.3	618.3	616.0	614.0
17-Jul-01	17:34:48	615.1	608.1	615.5	619.8	616.5	616.2	616.5	610.2	615.5	618.5	615.7	614.4
17-Jul-01	17:34:50	614.8	608.0	615.5	619.8	616.2	615.7	616.8	610.3	615.4	618.2	616.0	614.8
17-Jul-01	17:34:52	614.9	608.1	615.4	619.8	616.2	615.7	616.8	609.6	615.3	618.3	615.9	614.9
17-Jul-01	17:34:54	614.7	608.6	615.3	619.4	616.5	615.3	616.9	609.0	615.6	618.5	615.9	614.4
17-Jul-01	17:34:56	614.4	608.7	615.2	619.6	616.5	616.4	616.8	609.2	615.5	618.4	616.0	614.4
17-Jul-01	17:34:58	614.7	608.8	615.2	620.0	616.6	616.3	616.7	609.0	615.5	618.4	616.0	614.4
17-Jul-01	17:35:00	614.7	608.9	615.2	619.8	616.4	616.2	616.8	610.0	615.3	618.5	616.1	614.4
17-Jul-01	17:35:02	614.4	609.0	615.2	619.9	616.4	615.0	616.8	609.9	615.3	618.4	616.2	614.0
17-Jul-01	17:35:04	614.7	609.1	615.2	620.0	616.3	613.9	616.5	609.6	615.3	618.4	616.1	613.5
17-Jul-01	17:35:06	614.8	608.6	615.5	620.0	616.3	614.5	616.6	609.8	615.1	618.3	616.0	613.7
17-Jul-01	17:35:08	614.8	608.8	615.5	620.3	616.3	615.3	616.7	609.4	615.0	618.5	615.9	613.7
17-Jul-01	17:35:10	614.5	608.6	615.4	620.2	616.1	615.8	616.6	609.4	615.4	618.5	615.8	613.6
17-Jul-01	17:35:12	614.2	608.7	615.6	619.8	615.9	614.5	616.4	609.4	615.7	618.5	615.7	613.7
17-Jul-01	17:35:14	614.3	608.9	615.4	619.7	616.0	615.5	616.5	609.3	615.9	618.4	616.0	613.9
17-Jul-01	17:35:16	614.4	608.4	615.6	619.9	616.3	615.5	616.6	609.7	615.7	618.5	615.8	613.3
17-Jul-01	17:35:18	614.6	608.5	615.4	620.0	616.6	614.7	616.5	610.1	615.6	618.5	615.9	613.7
17-Jul-01	17:35:20	614.7	608.6	615.2	620.1	616.6	614.7	616.5	609.3	615.9	618.2	615.9	613.5
17-Jul-01	17:35:22	614.6	608.6	615.6	620.1	616.6	615.1	616.6	609.3	615.9	618.5	616.0	613.9
17-Jul-01	17:35:24	614.5	608.7	615.6	620.0	616.8	615.8	616.5	608.7	615.9	618.3	616.1	614.5
17-Jul-01	17:35:26	614.5	608.6	615.2	620.0	616.7	614.6	616.2	609.3	615.9	618.3	616.0	614.7
17-Jul-01	17:35:28	614.3	608.9	615.3	619.9	616.7	615.2	616.3	609.5	615.7	618.4	616.1	613.8
17-Jul-01	17:35:30	614.3	608.8	615.6	619.8	616.6	615.8	616.5	609.4	615.4	618.5	616.3	613.9
17-Jul-01	17:35:32	614.5	609.0	615.7	619.9	616.3	616.4	616.5	609.6	615.6	618.2	616.3	614.5
17-Jul-01	17:35:34	614.4	608.8	615.3	620.1	616.2	615.3	616.5	609.2	615.8	618.3	616.2	613.9
17-Jul-01	17:35:36	614.4	608.8	615.4	619.8	616.2	614.7	616.6	609.6	616.0	618.4	616.2	614.2
17-Jul-01	17:35:38	614.8	608.8	615.3	619.8	615.9	615.2	616.4	610.1	616.2	618.1	616.3	614.5
17-Jul-01	17:35:40	614.5	608.6	615.5	619.9	616.0	615.9	616.3	609.8	616.0	618.2	616.1	614.5
17-Jul-01	17:35:42	614.5	608.5	615.7	620.0	616.6	615.8	616.4	610.0	616.1	618.2	616.3	614.3
17-Jul-01	17:35:44	614.5	608.7	615.4	620.0	616.4	615.8	616.5	610.2	615.6	618.2	616.4	614.5
17-Jul-01	17:35:46	614.4	609.5	615.2	619.8	616.3	616.0	616.3	610.1	615.8	618.3	616.3	613.7
17-Jul-01	17:35:48	614.4	609.4	615.1	619.8	615.8	616.4	616.4	609.7	616.0	618.0	616.3	613.7
17-Jul-01	17:35:50	614.6	608.6	615.4	619.9	616.0	616.0	616.4	609.4	616.0	618.2	616.0	613.5
17-Jul-01	17:35:52	614.4	608.4	615.6	619.7	616.2	614.1	616.5	609.2	616.1	618.4	616.1	614.0
17-Jul-01	17:35:54	614.3	608.7	615.6	620.0	616.2	614.1	616.3	608.8	616.2	618.4	615.8	613.1
17-Jul-01	17:35:56	614.4	608.6	615.3	620.0	616.2	615.5	616.4	609.3	615.9	618.4	615.9	613.1
17-Jul-01	17:35:58	614.4	609.2	615.2	619.8	616.4	616.0	616.3	609.1	615.6	618.4	615.9	613.7
17-Jul-01	17:36:00	614.5	609.3	615.3	619.5	616.2	615.8	616.5	609.3	615.4	618.3	615.8	613.5
17-Jul-01	17:36:02	614.7	609.2	615.4	619.7	616.1	615.5	616.6	609.9	615.3	618.4	615.6	613.6
17-Jul-01	17:36:04	614.9	609.3	615.5	619.8	616.2	615.5	616.5	610.0	615.3	618.3	615.7	614.0
17-Jul-01	17:36:06	614.8	609.7	615.5	619.8	616.2	615.6	616.3	610.2	615.2	618.3	615.9	613.2
17-Jul-01	17:36:08	614.9	609.1	615.4	619.7	616.4	615.1	616.5	609.0	615.6	618.1	616.1	613.5
17-Jul-01	17:36:10	615.0	608.5	615.4	619.9	616.3	615.6	616.5	609.6	615.4	618.2	616.2	613.5
17-Jul-01	17:36:12	614.8	608.4	615.2	619.6	616.5	615.0	616.6	609.9	615.6	618.4	616.1	613.7
17-Jul-01	17:36:14	614.3	609.0	615.5	619.5	616.4	615.5	616.4	609.7	616.1	618.3	616.2	613.7
17-Jul-01	17:36:16	614.5	609.2	615.4	619.7	616.4	615.0	616.2	609.5	616.1	617.9	616.1	613.3
17-Jul-01	17:36:18	614.4	608.8	615.4	619.9	616.7	615.9	616.3	609.9	616.2	617.9	616.2	614.0
17-Jul-01	17:36:20	614.5	608.6	615.4	619.9	616.5	616.4	616.1	610.1	616.1	618.3	616.4	613.8
17-Jul-01	17:36:22	614.3	608.6	615.4	619.9	616.3	614.9	616.4	609.6	616.1	618.5	616.2	614.1
17-Jul-01	17:36:24	614.6	608.5	615.2	619.9	616.2	615.5	616.4	609.5	616.0	618.3	616.1	614.4
17-Jul-01	17:36:26	614.8	607.9	615.2	620.0	616.4	616.6	616.4	610.5	615.5	618.3	616.1	614.1

Table 1
Catawba Unit 2 Loop Hot Leg Temperature Data

17-Jul-01	17:36:28	614.3	608.0	615.5	619.8	616.7	616.0	616.6	610.4	615.6	618.4	616.0	614.0
17-Jul-01	17:36:30	614.5	608.5	615.7	619.6	616.7	615.9	616.6	609.6	615.3	618.5	616.2	613.1
17-Jul-01	17:36:32	614.7	608.6	615.5	619.7	616.7	616.4	616.3	610.1	615.5	618.6	616.3	613.5
17-Jul-01	17:36:34	614.9	608.6	615.3	619.7	616.5	616.5	616.6	610.6	615.2	618.6	616.3	613.5
17-Jul-01	17:36:36	614.9	608.4	615.5	619.4	616.6	615.9	616.8	610.5	614.8	618.5	616.2	614.4
17-Jul-01	17:36:38	614.8	608.6	615.4	619.7	616.3	615.1	616.9	609.9	615.2	618.3	616.2	614.3
17-Jul-01	17:36:40	614.8	608.4	615.3	619.9	616.2	615.8	616.8	609.6	615.5	618.3	616.1	614.0
17-Jul-01	17:36:42	614.7	608.7	615.1	619.9	616.5	615.3	616.3	609.5	615.5	618.4	616.2	614.3
17-Jul-01	17:36:44	614.6	608.7	615.2	620.1	616.5	615.7	616.5	609.6	615.5	618.3	616.1	614.1
17-Jul-01	17:36:46	614.5	609.0	615.1	620.0	616.3	615.7	616.5	609.2	615.8	618.3	616.1	614.0
17-Jul-01	17:36:48	614.4	609.1	615.1	620.0	616.4	615.8	616.3	609.6	615.8	618.3	616.1	614.3
17-Jul-01	17:36:50	614.5	609.1	615.4	619.8	616.3	616.2	616.6	610.0	615.4	618.3	615.8	613.4
17-Jul-01	17:36:52	614.2	609.3	615.3	619.6	616.2	616.4	616.7	609.7	615.6	618.1	616.1	614.1
17-Jul-01	17:36:54	614.2	609.0	615.3	619.8	616.2	616.2	616.8	610.0	615.7	618.2	616.2	614.1
17-Jul-01	17:36:56	613.9	609.3	615.4	619.7	616.7	615.5	616.4	610.0	615.9	618.2	616.1	614.1
17-Jul-01	17:36:58	614.1	609.3	615.4	619.8	616.6	614.9	616.5	609.9	616.1	618.1	616.1	614.5
17-Jul-01	17:37:00	614.4	609.0	615.5	619.9	616.4	615.4	616.3	609.9	616.0	618.3	616.2	614.6
17-Jul-01	17:37:02	614.4	609.0	615.6	619.7	616.5	616.1	616.5	609.9	615.6	618.3	616.4	613.8
17-Jul-01	17:37:04	614.4	609.0	615.4	619.5	616.8	616.5	616.4	609.8	615.4	618.4	616.2	614.3
17-Jul-01	17:37:06	614.5	609.0	615.4	619.7	617.0	616.8	616.5	609.8	615.8	618.3	616.1	614.5
17-Jul-01	17:37:08	614.8	608.8	615.2	620.1	616.7	616.3	616.5	609.9	615.6	618.3	616.1	614.2
17-Jul-01	17:37:10	614.6	609.0	615.2	620.1	616.4	615.8	616.5	609.8	615.3	618.3	616.3	613.5
17-Jul-01	17:37:12	614.6	609.3	615.2	620.1	616.0	616.3	616.6	609.2	615.4	618.3	616.1	613.8
17-Jul-01	17:37:14	614.7	608.9	615.1	620.2	616.0	616.4	616.6	609.4	615.8	618.0	616.1	614.1
17-Jul-01	17:37:16	614.7	608.7	615.1	620.1	616.1	616.1	616.5	610.0	615.7	618.2	616.1	613.6
17-Jul-01	17:37:18	614.6	609.0	615.2	620.1	616.1	615.9	616.5	610.0	615.7	618.2	615.9	613.5
17-Jul-01	17:37:20	614.5	609.0	615.4	619.9	615.9	614.9	616.4	609.6	616.0	618.3	615.7	613.3
17-Jul-01	17:37:22	614.4	608.4	615.5	619.7	616.4	615.6	616.5	610.1	615.8	618.4	616.0	613.5
17-Jul-01	17:37:24	614.4	608.7	615.6	619.5	616.3	616.2	616.5	609.7	615.8	618.4	616.2	613.3
17-Jul-01	17:37:26	614.7	608.6	615.5	619.5	616.4	616.6	616.6	610.2	615.2	618.4	616.2	613.6
17-Jul-01	17:37:28	614.7	608.6	615.5	619.5	616.3	616.4	616.6	609.9	615.3	618.4	616.0	613.6
17-Jul-01	17:37:30	614.6	608.7	615.9	619.5	616.7	616.4	616.5	609.8	615.3	618.2	616.2	613.4
17-Jul-01	17:37:32	614.6	608.5	615.7	619.8	616.6	616.1	616.5	609.8	615.2	618.4	616.1	612.7
17-Jul-01	17:37:34	614.6	608.7	615.4	619.5	616.6	616.3	616.5	610.1	615.4	618.5	616.2	613.6
17-Jul-01	17:37:36	614.5	608.8	615.3	619.5	616.5	616.2	616.9	609.7	615.4	618.5	616.0	613.3
17-Jul-01	17:37:38	614.5	608.5	615.4	619.7	616.4	616.6	616.8	610.1	615.2	618.3	616.0	614.0
17-Jul-01	17:37:40	614.4	608.8	615.3	619.3	616.1	615.9	616.8	609.9	615.3	618.6	616.1	614.3
17-Jul-01	17:37:42	614.4	609.1	615.3	619.8	616.2	616.2	616.7	609.9	615.5	618.5	616.5	614.3
17-Jul-01	17:37:44	614.4	609.2	615.3	619.7	616.3	615.5	616.5	609.9	615.8	618.6	616.5	613.8
17-Jul-01	17:37:46	614.3	609.2	615.2	619.6	616.5	615.1	616.5	610.8	615.3	618.5	616.3	614.0
17-Jul-01	17:37:48	614.4	609.2	614.9	619.9	616.5	615.0	616.6	610.3	615.5	618.1	616.4	614.1
17-Jul-01	17:37:50	614.3	608.9	615.0	619.8	616.1	615.2	616.7	609.7	615.7	618.2	616.3	614.0
17-Jul-01	17:37:52	614.4	609.1	615.1	619.9	615.8	614.2	616.7	609.5	616.1	618.1	616.1	614.0
17-Jul-01	17:37:54	614.5	609.0	615.1	620.2	615.9	614.7	616.7	608.9	616.0	618.0	616.2	613.9
17-Jul-01	17:37:56	614.4	609.0	615.1	619.9	616.2	615.7	616.6	609.8	615.6	618.3	616.0	613.5
17-Jul-01	17:37:58	614.3	609.1	615.3	620.0	616.0	615.8	616.7	610.0	615.4	618.4	616.0	613.5
17-Jul-01	17:38:00	614.4	609.0	615.2	620.0	616.0	614.8	616.8	609.0	615.9	618.4	616.1	613.1
17-Jul-01	17:38:02	614.0	608.6	615.6	620.1	616.1	614.8	616.9	609.5	616.2	618.4	616.1	613.6
17-Jul-01	17:38:04	614.2	609.2	615.6	620.4	616.1	616.1	616.6	610.3	616.1	618.3	616.2	613.7
17-Jul-01	17:38:06	614.5	608.8	615.5	619.9	616.2	616.0	616.8	610.1	615.9	618.3	616.1	613.6
17-Jul-01	17:38:08	614.4	608.6	615.6	619.8	616.5	614.6	616.7	609.8	616.0	618.3	616.2	613.9
17-Jul-01	17:38:10	614.5	608.7	615.3	619.8	616.2	614.7	616.6	609.4	615.9	618.2	616.3	614.0
17-Jul-01	17:38:12	614.5	608.6	615.3	619.5	616.6	615.2	616.4	609.6	616.0	618.3	616.1	614.4
17-Jul-01	17:38:14	614.7	608.8	615.4	619.1	616.5	614.1	616.5	609.6	616.0	618.3	615.7	614.7
17-Jul-01	17:38:16	614.7	608.4	615.4	619.4	616.3	614.3	616.9	609.3	616.1	618.5	615.8	614.5
17-Jul-01	17:38:18	614.7	609.3	615.2	619.5	616.2	614.1	616.8	609.7	616.0	618.4	616.0	614.5
17-Jul-01	17:38:20	614.9	609.5	615.7	619.7	616.4	613.7	616.6	609.9	615.8	618.0	615.9	614.6
17-Jul-01	17:38:22	614.8	608.9	615.8	620.0	616.0	613.3	616.6	609.8	615.8	618.1	616.1	614.8
17-Jul-01	17:38:24	614.9	609.3	615.5	620.0	616.2	614.8	616.7	610.4	615.3	618.2	616.1	613.7
17-Jul-01	17:38:26	614.6	609.7	615.4	620.1	616.0	615.3	616.7	609.6	615.4	618.1	616.2	613.6
17-Jul-01	17:38:28	614.7	609.6	615.7	620.0	616.1	615.0	616.5	609.6	615.7	617.7	616.1	614.4
17-Jul-01	17:38:30	614.9	609.3	615.8	620.0	616.4	615.8	616.7	609.0	615.6	617.8	615.8	614.6
17-Jul-01	17:38:32	614.8	609.3	615.8	619.9	616.4	615.1	616.4	609.8	615.8	617.9	615.8	614.4
17-Jul-01	17:38:34	615.0	609.2	615.8	619.6	616.3	615.6	616.4	609.7	615.9	618.1	615.8	613.8
17-Jul-01	17:38:36	614.6	609.2	615.9	619.7	615.8	615.5	616.7	609.9	615.8	618.0	616.1	613.5
17-Jul-01	17:38:38	614.4	609.1	615.7	619.8	615.8	616.0	616.7	609.7	615.9	618.0	616.4	613.4
17-Jul-01	17:38:40	614.3	609.3	615.5	619.7	615.7	616.2	616.8	609.6	615.8	618.1	616.4	613.2
17-Jul-01	17:38:42	614.2	609.3	615.3	619.7	615.9	616.2	616.9	610.3	615.9	618.3	616.3	613.4
17-Jul-01	17:38:44	614.4	609.2	615.4	619.8	616.1	616.1	617.0	610.3	615.8	618.2	616.2	613.7
17-Jul-01	17:38:46	614.3	608.7	615.4	619.5	616.3	616.4	616.7	610.7	615.5	618.3	615.9	613.6
17-Jul-01	17:38:48	614.2	609.0	615.4	619.4	616.4	616.8	616.9	609.9	615.0	618.2	616.0	613.4
17-Jul-01	17:38:50	614.3	608.9	615.5	619.7	616.6	616.6	616.6	610.7	615.0	618.4	615.9	614.5
17-Jul-01	17:38:52	614.5	608.1	615.7	619.6	616.7	614.8	616.8	610.2	615.2	618.4	616.0	614.1

Table 1
Catawba Unit 2 Loop Hot Leg Temperature Data

17-Jul-01	17:38:54	614.7	608.5	615.5	619.5	616.6	614.0	616.6	609.6	615.8	618.3	616.2	614.3
17-Jul-01	17:38:56	614.8	608.4	615.5	619.7	616.7	614.8	616.4	609.0	615.7	618.1	616.2	614.5
17-Jul-01	17:38:58	614.8	608.0	615.6	619.8	616.7	614.8	616.6	609.7	616.1	618.3	616.3	614.6
17-Jul-01	17:39:00	614.7	608.3	615.3	620.0	616.6	615.6	616.3	610.1	616.1	618.3	616.3	614.6
17-Jul-01	17:39:02	614.5	608.5	615.4	619.7	616.3	614.8	616.5	609.6	616.0	618.3	616.4	614.4
17-Jul-01	17:39:04	614.5	608.5	615.5	619.7	616.7	615.5	616.5	609.5	616.1	618.5	616.1	614.6
17-Jul-01	17:39:06	614.6	608.8	615.5	619.9	616.3	615.9	616.7	609.4	616.1	618.3	616.2	614.3
17-Jul-01	17:39:08	614.4	608.9	615.6	619.8	616.2	615.4	616.7	609.5	615.8	618.3	616.3	614.9
17-Jul-01	17:39:10	614.5	608.9	615.6	620.2	616.3	615.4	616.8	609.7	615.5	618.4	616.3	614.4
17-Jul-01	17:39:12	614.7	608.6	615.6	620.2	616.1	615.3	617.0	609.7	615.7	618.4	616.4	614.3
17-Jul-01	17:39:14	614.8	608.4	615.6	620.2	615.8	615.4	617.0	609.8	615.8	618.3	616.4	613.9
17-Jul-01	17:39:16	614.6	608.3	615.5	620.0	616.1	615.3	616.9	609.8	615.9	618.5	616.1	614.2
17-Jul-01	17:39:18	614.5	608.5	615.4	620.1	616.2	614.9	616.6	610.0	615.7	618.5	616.3	613.2
17-Jul-01	17:39:20	614.4	608.9	615.5	619.9	616.4	615.6	616.8	610.0	615.6	618.3	616.1	613.9
17-Jul-01	17:39:22	614.6	608.8	615.3	619.9	616.1	616.0	616.5	609.8	615.5	618.4	616.2	614.2
17-Jul-01	17:39:24	614.4	608.5	615.6	619.9	616.4	615.6	616.6	609.6	615.4	618.4	616.0	614.5
17-Jul-01	17:39:26	614.5	608.6	615.4	619.4	616.5	615.4	616.6	609.8	615.8	618.1	616.0	614.2
17-Jul-01	17:39:28	614.5	609.0	615.2	619.5	616.7	615.4	616.5	609.3	616.1	618.0	616.2	614.2
17-Jul-01	17:39:30	614.8	608.9	615.2	619.4	616.5	615.7	616.4	609.2	616.0	618.0	616.2	613.8
17-Jul-01	17:39:32	614.7	608.7	615.3	619.5	616.3	615.7	616.6	609.6	615.8	618.0	616.4	613.9
17-Jul-01	17:39:34	614.6	608.7	615.5	619.7	616.4	615.3	616.7	609.3	615.9	618.2	616.3	614.0
17-Jul-01	17:39:36	614.7	608.8	615.3	619.8	616.2	615.8	616.8	609.4	615.7	618.2	616.3	614.0
17-Jul-01	17:39:38	614.5	608.5	615.5	620.0	616.4	614.7	617.0	609.5	615.9	617.8	616.2	613.7
17-Jul-01	17:39:40	614.4	609.3	615.5	620.3	616.2	615.3	616.9	610.0	615.8	617.9	616.2	613.5
17-Jul-01	17:39:42	614.6	609.1	615.5	620.5	616.3	614.8	616.9	610.1	615.8	618.2	616.3	614.2
17-Jul-01	17:39:44	614.6	608.9	615.4	620.1	616.6	614.0	617.0	609.7	616.0	618.1	616.2	614.6
17-Jul-01	17:39:46	614.5	608.4	615.3	619.8	616.6	614.8	616.7	609.9	615.8	618.3	616.3	614.9
17-Jul-01	17:39:48	614.9	608.5	615.2	619.7	616.4	614.4	616.5	610.3	615.6	618.0	616.4	614.7
17-Jul-01	17:39:50	614.6	608.8	615.4	619.9	616.2	615.0	616.6	609.0	616.0	617.9	616.2	614.5
17-Jul-01	17:39:52	614.4	608.7	615.2	619.8	616.3	615.7	616.5	609.0	616.0	618.1	616.2	614.9
17-Jul-01	17:39:54	614.4	609.0	615.5	619.7	616.5	616.3	616.6	609.5	615.7	618.4	616.1	614.4
17-Jul-01	17:39:56	614.4	608.9	615.3	619.5	616.4	615.9	616.8	609.8	615.7	618.4	615.9	614.4
17-Jul-01	17:39:58	614.8	608.7	615.3	619.8	616.2	615.6	616.5	609.4	615.9	618.2	616.2	614.3
17-Jul-01	17:40:00	614.9	608.4	615.1	619.8	615.9	615.8	616.5	609.6	615.9	618.3	616.3	614.3
17-Jul-01	17:40:02	614.4	608.9	615.6	619.8	615.9	615.4	616.5	609.9	615.7	618.6	616.4	614.9
17-Jul-01	17:40:04	614.3	609.0	616.0	619.8	616.1	615.7	616.7	610.6	615.6	618.5	616.2	614.9
17-Jul-01	17:40:06	614.7	609.0	615.9	619.6	616.3	615.6	616.7	610.6	615.6	618.4	616.0	614.5
17-Jul-01	17:40:08	614.7	608.9	615.8	619.8	615.9	615.2	616.5	610.5	615.5	618.3	616.1	614.4
17-Jul-01	17:40:10	614.7	608.9	615.7	619.6	616.2	614.7	616.6	610.4	615.6	618.3	616.3	613.4
17-Jul-01	17:40:12	614.9	608.6	615.9	619.5	616.2	614.9	617.0	609.8	615.6	618.3	616.0	613.5
17-Jul-01	17:40:14	614.9	608.5	615.8	619.5	616.3	613.7	617.2	610.0	615.7	618.3	615.8	614.2
17-Jul-01	17:40:16	614.9	608.7	615.7	619.8	615.7	614.9	616.7	610.0	615.8	618.3	615.8	614.8
17-Jul-01	17:40:18	614.8	609.2	615.6	619.7	616.0	614.6	616.4	609.3	616.1	618.5	615.7	615.1
17-Jul-01	17:40:20	614.6	609.0	615.9	620.0	615.9	613.7	616.5	609.4	615.9	618.4	616.1	614.6
17-Jul-01	17:40:22	614.7	608.9	615.8	619.7	616.1	614.4	616.7	610.1	615.7	618.4	616.4	613.9
17-Jul-01	17:40:24	615.0	609.3	615.5	619.5	615.9	615.2	616.6	610.2	615.9	618.3	616.2	613.8
17-Jul-01	17:40:26	614.9	609.2	615.7	619.6	616.1	615.2	616.6	610.0	615.8	618.4	616.3	613.1
17-Jul-01	17:40:28	614.8	609.2	615.7	619.3	616.4	615.0	616.6	610.4	615.6	618.2	616.2	613.0
17-Jul-01	17:40:30	614.8	609.3	615.3	619.8	616.1	615.8	616.4	610.3	615.8	618.3	616.1	613.6
17-Jul-01	17:40:32	614.9	609.1	615.4	619.9	616.4	615.8	616.6	610.4	615.5	618.5	616.0	614.4
17-Jul-01	17:40:34	614.8	609.2	615.5	619.9	616.7	616.5	616.7	610.6	615.2	618.2	616.1	614.7
17-Jul-01	17:40:36	614.4	609.2	615.5	619.7	616.7	616.3	616.7	610.6	615.2	618.2	616.0	614.3
17-Jul-01	17:40:38	614.8	609.3	615.4	619.7	616.5	615.7	616.5	610.1	615.3	618.2	615.9	614.7
17-Jul-01	17:40:40	614.9	608.7	615.5	619.7	616.2	615.3	616.5	610.0	615.6	618.0	616.0	614.5
17-Jul-01	17:40:42	614.9	608.7	615.8	619.8	616.2	615.7	616.5	609.8	615.6	618.1	616.1	614.4
17-Jul-01	17:40:44	614.9	608.7	615.6	619.6	616.5	616.0	616.3	610.3	615.6	618.3	616.3	613.9
17-Jul-01	17:40:46	614.4	608.7	615.4	619.8	616.4	615.7	616.3	610.5	615.7	618.3	616.3	613.9
17-Jul-01	17:40:48	614.5	609.1	615.5	620.0	616.3	614.8	616.3	610.1	616.0	618.2	616.7	614.0
17-Jul-01	17:40:50	614.7	608.8	615.5	619.8	616.2	615.7	616.4	609.5	616.1	618.4	616.3	613.9
17-Jul-01	17:40:52	614.8	609.2	615.5	619.5	616.6	615.7	616.5	609.1	616.1	618.2	615.9	614.3
17-Jul-01	17:40:54	614.7	609.4	615.3	619.4	616.6	616.7	616.4	609.9	615.8	618.2	616.2	614.8
17-Jul-01	17:40:56	615.1	608.6	615.3	619.5	616.4	616.4	616.6	609.9	616.0	618.1	616.1	614.3
17-Jul-01	17:40:58	615.0	608.6	615.3	619.7	616.2	615.6	617.0	609.6	616.2	618.2	616.2	614.0
17-Jul-01	17:41:00	614.8	608.8	615.5	619.8	616.3	614.2	616.8	609.5	616.1	618.2	616.0	614.2
17-Jul-01	17:41:02	614.5	609.0	615.3	619.8	616.2	614.4	616.6	609.7	615.8	618.3	615.9	614.1
17-Jul-01	17:41:04	614.5	609.1	615.4	620.1	616.3	615.2	616.9	609.3	616.0	618.2	615.8	614.6
17-Jul-01	17:41:06	614.7	609.4	615.2	620.2	616.2	614.9	616.8	609.8	615.8	618.2	616.3	614.5
17-Jul-01	17:41:08	614.9	609.1	615.3	620.0	616.0	615.3	616.7	609.5	615.9	618.2	616.1	614.8
17-Jul-01	17:41:10	614.7	608.9	615.5	620.0	616.5	616.3	616.5	610.3	615.8	618.2	616.2	614.7
17-Jul-01	17:41:12	614.7	608.7	615.7	620.1	616.0	616.6	616.4	610.3	615.7	618.3	616.3	614.6
17-Jul-01	17:41:14	614.7	608.5	615.6	620.3	616.1	615.9	616.3	609.6	615.8	618.2	616.2	614.3
17-Jul-01	17:41:16	614.8	608.4	615.5	620.4	616.1	614.5	616.2	609.0	616.0	618.3	615.9	613.9
17-Jul-01	17:41:18	614.7	608.3	615.6	620.2	616.4	614.8	616.1	609.3	615.6	618.3	616.0	614.3

Table 1
Catawba Unit 2 Loop Hot Leg Temperature Data

17-Jul-01	17:41:20	614.7	608.4	615.6	620.0	616.5	614.4	616.4	610.0	615.6	618.3	616.0	614.4
17-Jul-01	17:41:22	614.6	608.4	615.6	620.2	616.4	615.4	616.7	609.6	615.4	618.4	616.1	614.7
17-Jul-01	17:41:24	614.5	608.3	615.7	619.7	616.1	614.3	616.9	610.2	615.7	618.6	616.0	614.0
17-Jul-01	17:41:26	614.2	609.0	615.5	620.0	616.0	615.2	616.9	609.8	615.6	618.6	616.1	614.1
17-Jul-01	17:41:28	614.2	608.9	615.7	619.8	616.6	615.4	616.5	609.6	615.9	618.6	616.0	614.1
17-Jul-01	17:41:30	614.3	609.1	615.5	620.1	616.3	615.5	616.2	610.1	615.7	618.4	616.0	614.8
17-Jul-01	17:41:32	614.5	609.0	615.4	620.3	616.5	615.7	616.6	609.2	615.7	618.3	616.0	614.4
17-Jul-01	17:41:34	614.4	609.2	615.3	620.4	616.5	616.2	616.8	609.9	615.5	617.9	616.2	614.6
17-Jul-01	17:41:36	614.7	608.9	615.3	620.0	616.7	616.5	616.9	610.0	615.3	618.2	616.2	614.7
17-Jul-01	17:41:38	614.8	608.9	615.5	620.0	616.4	615.6	616.8	609.3	615.8	618.0	616.2	614.4
17-Jul-01	17:41:40	614.4	608.7	615.6	620.1	616.1	614.6	617.0	608.6	615.9	618.1	616.1	614.7
17-Jul-01	17:41:42	614.4	608.8	615.3	620.0	616.2	615.5	616.8	609.4	615.8	618.0	616.2	614.5
17-Jul-01	17:41:44	614.1	609.0	615.3	619.8	616.3	613.9	616.7	609.1	615.9	618.1	615.9	614.1
17-Jul-01	17:41:46	614.2	609.0	615.4	619.8	616.3	615.2	616.6	609.3	616.0	618.3	616.1	614.0
17-Jul-01	17:41:48	614.2	608.8	615.5	619.6	616.3	615.5	616.5	609.8	615.7	618.7	616.0	614.0
17-Jul-01	17:41:50	614.3	608.7	615.5	620.0	616.1	615.0	616.5	610.2	615.3	618.8	615.6	614.5
17-Jul-01	17:41:52	614.2	608.9	615.5	620.0	616.2	614.8	616.5	609.5	615.7	618.6	615.6	614.6
17-Jul-01	17:41:54	614.4	608.8	615.8	619.7	616.7	615.1	616.4	609.8	615.7	618.6	615.9	614.7
17-Jul-01	17:41:56	614.6	608.3	615.7	619.9	616.6	615.3	616.7	609.8	615.5	618.4	615.8	614.5
17-Jul-01	17:41:58	614.6	609.0	615.6	620.0	616.5	615.5	616.6	610.1	615.6	618.3	616.1	614.3
17-Jul-01	17:42:00	614.7	608.7	615.7	619.9	616.6	615.9	616.8	609.8	615.6	618.4	616.2	614.5
17-Jul-01	17:42:02	614.6	609.1	615.5	619.8	616.7	616.3	616.9	609.8	615.4	618.3	616.3	614.0
17-Jul-01	17:42:04	614.6	609.1	615.5	619.5	616.7	616.1	616.7	609.4	615.6	618.3	616.4	614.4
17-Jul-01	17:42:06	614.5	609.2	615.5	619.2	616.6	616.1	616.4	610.1	615.4	618.3	616.3	614.5
17-Jul-01	17:42:08	614.4	609.3	615.5	619.4	616.2	615.5	616.5	609.2	615.8	618.2	616.2	614.0
17-Jul-01	17:42:10	614.0	609.2	615.5	619.8	616.4	615.9	616.4	609.7	615.7	618.3	616.3	613.6
17-Jul-01	17:42:12	614.3	609.4	615.5	619.5	616.0	615.9	616.7	610.0	615.6	618.4	616.0	613.7
17-Jul-01	17:42:14	614.7	609.3	615.5	619.3	616.5	615.2	616.6	609.6	615.9	618.5	615.9	613.4
17-Jul-01	17:42:16	614.8	608.9	615.5	619.4	616.4	615.4	616.4	609.4	615.9	618.4	615.8	613.8
17-Jul-01	17:42:18	614.8	609.0	615.6	619.5	616.3	614.3	616.7	608.9	615.9	618.4	615.9	614.0
17-Jul-01	17:42:20	614.7	609.4	615.5	619.5	616.3	613.5	616.5	609.3	616.1	618.3	616.1	614.6
17-Jul-01	17:42:22	614.7	609.1	615.6	619.6	616.2	614.8	616.4	609.9	616.0	618.3	616.1	614.4
17-Jul-01	17:42:24	614.8	609.1	615.7	619.7	616.2	615.0	616.5	609.2	615.8	618.3	616.0	614.7
17-Jul-01	17:42:26	614.9	608.6	615.8	619.6	616.2	614.9	616.6	609.6	615.3	618.1	616.2	615.1
17-Jul-01	17:42:28	615.1	608.9	615.9	619.6	616.2	614.9	616.6	609.9	615.5	617.7	616.2	614.9
17-Jul-01	17:42:30	614.9	609.2	615.6	619.7	616.0	615.4	616.5	609.9	615.6	617.9	616.4	614.9
17-Jul-01	17:42:32	614.8	608.8	615.7	619.2	616.3	616.1	616.7	610.1	615.4	618.2	616.1	614.6
17-Jul-01	17:42:34	614.5	608.7	615.8	619.3	616.6	616.8	616.8	610.4	615.3	618.4	615.9	614.6
17-Jul-01	17:42:36	614.4	608.8	615.6	619.5	616.8	616.0	616.9	609.3	615.7	618.3	616.1	614.5
17-Jul-01	17:42:38	614.5	609.1	615.6	619.4	616.5	616.2	616.8	610.2	615.6	618.3	616.1	614.3
17-Jul-01	17:42:40	614.6	609.3	615.6	619.7	616.6	616.4	616.5	609.2	615.9	618.3	616.0	614.6
17-Jul-01	17:42:42	614.6	609.3	615.5	619.9	616.4	616.1	616.8	608.8	616.0	618.4	616.1	614.2
17-Jul-01	17:42:44	614.8	608.7	615.2	620.1	616.4	616.5	616.5	608.9	616.3	618.3	616.2	614.3
17-Jul-01	17:42:46	614.4	608.8	615.3	620.2	616.3	616.5	616.5	609.5	616.3	618.2	616.2	614.4
17-Jul-01	17:42:48	614.2	608.5	615.5	620.4	616.4	615.7	616.8	609.1	616.1	618.1	616.3	613.8
17-Jul-01	17:42:50	614.2	608.5	615.7	620.4	616.3	614.8	616.7	609.2	616.1	618.2	616.2	613.9
17-Jul-01	17:42:52	614.3	609.0	615.6	620.5	616.5	616.0	616.6	609.2	616.2	617.9	616.1	614.3
17-Jul-01	17:42:54	614.6	609.2	615.4	620.6	616.5	615.6	616.6	609.3	616.2	618.1	616.2	613.9
17-Jul-01	17:42:56	614.5	608.8	615.4	620.5	616.1	615.2	616.7	609.0	616.2	618.2	616.0	613.9
17-Jul-01	17:42:58	614.6	609.0	615.3	620.4	616.5	615.7	616.4	609.5	616.0	618.1	616.3	614.4
17-Jul-01	17:43:00	614.4	609.0	615.4	620.0	616.2	615.7	616.2	609.9	615.9	617.8	616.2	614.3
17-Jul-01	17:43:02	614.5	609.0	615.2	619.8	616.0	614.6	616.6	609.2	616.0	618.2	615.9	613.9
17-Jul-01	17:43:04	614.6	608.6	615.2	619.8	616.0	614.7	616.6	610.2	616.0	618.2	616.1	614.2
17-Jul-01	17:43:06	614.2	608.8	615.3	619.8	616.2	615.2	616.7	610.1	615.9	618.1	616.0	614.5
17-Jul-01	17:43:08	614.1	608.7	615.3	620.0	616.2	615.3	616.5	609.9	615.6	618.2	616.0	614.0
17-Jul-01	17:43:10	614.3	608.3	615.5	620.0	616.4	615.5	616.5	609.6	615.7	618.2	616.0	614.1
17-Jul-01	17:43:12	614.3	608.4	615.6	619.7	616.5	615.6	616.4	609.3	615.7	618.4	616.1	613.9
17-Jul-01	17:43:14	614.5	608.4	615.5	619.6	616.7	615.9	616.4	609.4	615.4	618.1	616.4	613.3
17-Jul-01	17:43:16	614.6	608.5	615.3	619.3	616.5	615.9	616.7	609.4	615.7	618.2	616.3	613.9
17-Jul-01	17:43:18	614.3	608.4	615.7	619.5	616.6	615.2	616.2	610.2	615.8	618.4	616.0	614.4
17-Jul-01	17:43:20	614.5	608.5	615.6	619.7	616.5	615.5	616.5	610.5	615.4	618.4	615.7	614.7
17-Jul-01	17:43:22	614.8	608.6	615.4	620.1	616.4	615.9	616.6	610.3	615.2	618.4	616.1	614.4
17-Jul-01	17:43:24	615.0	608.6	615.6	619.8	616.2	616.4	616.6	610.0	615.3	618.5	616.4	613.8
17-Jul-01	17:43:26	614.8	608.6	615.5	619.7	616.4	616.4	616.6	609.4	615.5	618.6	616.0	613.4
17-Jul-01	17:43:28	614.8	608.8	615.5	619.8	616.0	616.5	616.2	610.4	615.3	618.5	615.9	613.5
17-Jul-01	17:43:30	614.8	609.1	615.5	619.6	615.7	615.9	616.4	609.4	615.3	618.4	616.1	613.7
17-Jul-01	17:43:32	614.6	609.0	615.5	619.9	616.1	616.0	616.2	609.8	615.7	618.0	616.1	613.7
17-Jul-01	17:43:34	614.6	608.6	615.7	620.0	616.1	614.3	616.2	609.8	615.9	618.1	616.2	614.3
17-Jul-01	17:43:36	614.9	608.5	615.7	619.9	616.4	615.3	616.0	609.4	615.8	617.9	616.3	613.9
17-Jul-01	17:43:38	614.8	608.3	615.6	620.2	616.3	615.6	616.2	609.3	615.3	618.0	616.6	614.3
17-Jul-01	17:43:40	614.8	608.1	615.6	620.3	616.3	616.0	616.1	610.0	615.2	617.9	616.6	614.2
17-Jul-01	17:43:42	614.8	608.3	615.6	620.1	616.2	615.5	616.0	609.8	615.9	618.0	616.4	614.1
17-Jul-01	17:43:44	614.4	608.7	615.6	619.8	616.1	614.6	616.3	609.5	615.7	617.9	616.2	614.6

Table 1
Catawba Unit 2 Loop Hot Leg Temperature Data

17-Jul-01	17:43:46	614.2	609.0	615.6	619.7	616.0	614.5	616.2	609.7	615.7	618.3	616.2	614.5
17-Jul-01	17:43:48	614.4	608.9	615.6	619.7	616.5	615.1	616.3	610.1	615.4	618.3	616.2	614.0
17-Jul-01	17:43:50	614.5	608.9	615.3	619.6	616.6	615.9	616.3	610.1	615.5	618.3	616.2	614.0
17-Jul-01	17:43:52	614.6	609.2	615.3	620.0	616.2	615.3	616.2	610.0	615.4	618.4	616.1	613.8
17-Jul-01	17:43:54	614.7	609.2	615.3	619.8	616.4	615.4	616.4	610.0	615.4	618.4	616.0	613.7
17-Jul-01	17:43:56	614.8	609.3	615.2	619.6	616.1	615.7	616.3	610.1	615.5	618.3	616.1	613.5
17-Jul-01	17:43:58	615.0	609.0	615.2	620.0	616.0	615.4	616.3	609.6	615.6	618.1	615.9	613.8
17-Jul-01	17:44:00	614.8	608.7	615.3	620.1	616.1	613.8	616.3	610.0	615.7	618.0	615.9	613.9
17-Jul-01	17:44:02	614.6	608.5	615.5	620.2	616.4	614.6	616.6	610.1	615.5	618.2	615.9	614.2
17-Jul-01	17:44:04	614.5	608.1	615.4	619.9	616.7	615.5	616.7	610.0	615.6	618.3	616.1	613.2
17-Jul-01	17:44:06	614.5	608.4	615.5	619.6	616.2	615.1	616.6	609.7	615.6	618.2	616.0	613.8
17-Jul-01	17:44:08	614.7	608.1	615.5	619.9	616.4	615.5	616.4	609.8	615.5	618.3	616.0	613.2
17-Jul-01	17:44:10	614.5	607.9	615.6	619.8	616.0	615.4	616.4	609.5	615.4	618.5	616.0	613.5

Table 2
Catawba Unit 2 Loop Cold Leg Temperature Data

		T-Cold, deg F			
		Loop A	Loop B	Loop C	Loop D
DATE	TIME	C2A0676	C2A0682	C2A0688	C2A0694
17-Jul-01	17:34:10	554.5	556.0	555.3	556.9
17-Jul-01	17:34:12	554.5	556.1	555.4	556.9
17-Jul-01	17:34:14	554.5	556.1	555.3	556.8
17-Jul-01	17:34:16	554.5	556.1	555.3	556.8
17-Jul-01	17:34:18	554.4	556.1	555.3	556.9
17-Jul-01	17:34:20	554.4	556.0	555.4	556.9
17-Jul-01	17:34:22	554.4	556.0	555.4	556.9
17-Jul-01	17:34:24	554.4	556.1	555.4	556.9
17-Jul-01	17:34:26	554.4	556.1	555.3	556.9
17-Jul-01	17:34:28	554.3	556.1	555.3	556.9
17-Jul-01	17:34:30	554.4	556.1	555.3	556.9
17-Jul-01	17:34:32	554.4	556.1	555.3	556.8
17-Jul-01	17:34:34	554.4	556.1	555.3	556.8
17-Jul-01	17:34:36	554.4	556.0	555.3	556.8
17-Jul-01	17:34:38	554.4	556.0	555.3	556.8
17-Jul-01	17:34:40	554.4	556.0	555.3	556.8
17-Jul-01	17:34:42	554.4	556.0	555.3	556.8
17-Jul-01	17:34:44	554.4	556.0	555.4	556.8
17-Jul-01	17:34:46	554.4	556.0	555.4	556.9
17-Jul-01	17:34:48	554.4	556.1	555.4	556.9
17-Jul-01	17:34:50	554.4	556.1	555.4	556.9
17-Jul-01	17:34:52	554.4	556.0	555.4	556.8
17-Jul-01	17:34:54	554.4	556.0	555.4	556.8
17-Jul-01	17:34:56	554.5	556.1	555.4	556.9
17-Jul-01	17:34:58	554.4	556.0	555.3	556.9
17-Jul-01	17:35:00	554.4	556.1	555.3	556.8
17-Jul-01	17:35:02	554.4	556.0	555.3	556.9
17-Jul-01	17:35:04	554.4	556.0	555.4	556.9
17-Jul-01	17:35:06	554.4	556.0	555.3	556.9
17-Jul-01	17:35:08	554.4	556.1	555.4	556.9
17-Jul-01	17:35:10	554.4	556.0	555.4	556.8
17-Jul-01	17:35:12	554.4	556.0	555.4	556.9
17-Jul-01	17:35:14	554.4	556.0	555.4	556.9
17-Jul-01	17:35:16	554.4	556.1	555.4	556.9
17-Jul-01	17:35:18	554.4	556.0	555.4	556.9
17-Jul-01	17:35:20	554.4	556.0	555.4	556.9
17-Jul-01	17:35:22	554.4	556.0	555.3	556.9
17-Jul-01	17:35:24	554.4	556.0	555.3	556.9
17-Jul-01	17:35:26	554.4	556.0	555.4	556.8
17-Jul-01	17:35:28	554.4	556.0	555.3	556.8
17-Jul-01	17:35:30	554.4	556.0	555.3	556.9
17-Jul-01	17:35:32	554.4	556.1	555.3	556.9
17-Jul-01	17:35:34	554.5	556.1	555.2	556.9
17-Jul-01	17:35:36	554.4	556.0	555.3	556.8
17-Jul-01	17:35:38	554.4	556.0	555.3	556.8
17-Jul-01	17:35:40	554.4	556.0	555.3	556.8
17-Jul-01	17:35:42	554.4	556.0	555.4	556.8
17-Jul-01	17:35:44	554.4	556.0	555.4	556.9
17-Jul-01	17:35:46	554.4	556.0	555.3	556.9
17-Jul-01	17:35:48	554.4	556.0	555.3	556.9
17-Jul-01	17:35:50	554.4	556.0	555.3	556.9
17-Jul-01	17:35:52	554.5	556.0	555.3	556.8
17-Jul-01	17:35:54	554.4	556.0	555.3	556.8
17-Jul-01	17:35:56	554.4	556.0	555.3	556.8
17-Jul-01	17:35:58	554.4	556.0	555.3	556.9
17-Jul-01	17:36:00	554.4	556.0	555.3	556.9
17-Jul-01	17:36:02	554.4	556.0	555.3	556.9
17-Jul-01	17:36:04	554.4	556.0	555.3	556.9
17-Jul-01	17:36:06	554.4	556.0	555.4	556.9
17-Jul-01	17:36:08	554.5	556.0	555.4	556.9
17-Jul-01	17:36:10	554.5	556.1	555.4	556.9
17-Jul-01	17:36:12	554.5	556.1	555.3	557.0
17-Jul-01	17:36:14	554.5	556.0	555.4	556.9
17-Jul-01	17:36:16	554.5	556.1	555.4	557.0
17-Jul-01	17:36:18	554.6	556.1	555.4	557.0
17-Jul-01	17:36:20	554.5	556.2	555.3	556.9
17-Jul-01	17:36:22	554.5	556.1	555.3	556.9
17-Jul-01	17:36:24	554.4	556.1	555.3	557.0
17-Jul-01	17:36:26	554.4	556.1	555.3	557.0

Table 2
Catawba Unit 2 Loop Cold Leg Temperature Data

17-Jul-01	17:36:28	554.4	556.0	555.4	556.9
17-Jul-01	17:36:30	554.4	556.0	555.4	556.9
17-Jul-01	17:36:32	554.5	556.1	555.3	556.9
17-Jul-01	17:36:34	554.4	556.0	555.3	556.8
17-Jul-01	17:36:36	554.4	556.0	555.3	556.8
17-Jul-01	17:36:38	554.5	556.0	555.3	556.8
17-Jul-01	17:36:40	554.4	556.0	555.2	556.9
17-Jul-01	17:36:42	554.4	556.0	555.3	556.9
17-Jul-01	17:36:44	554.4	556.0	555.3	556.9
17-Jul-01	17:36:46	554.4	555.9	555.2	556.8
17-Jul-01	17:36:48	554.4	556.0	555.3	556.9
17-Jul-01	17:36:50	554.4	556.0	555.3	556.8
17-Jul-01	17:36:52	554.4	556.0	555.2	556.8
17-Jul-01	17:36:54	554.4	556.0	555.3	556.8
17-Jul-01	17:36:56	554.4	556.0	555.2	556.8
17-Jul-01	17:36:58	554.4	556.0	555.3	556.9
17-Jul-01	17:37:00	554.4	556.0	555.3	556.8
17-Jul-01	17:37:02	554.4	556.0	555.3	556.8
17-Jul-01	17:37:04	554.4	556.0	555.3	556.8
17-Jul-01	17:37:06	554.4	556.0	555.3	556.9
17-Jul-01	17:37:08	554.3	556.0	555.3	556.9
17-Jul-01	17:37:10	554.4	556.0	555.3	556.8
17-Jul-01	17:37:12	554.4	556.0	555.3	556.8
17-Jul-01	17:37:14	554.4	556.0	555.3	556.8
17-Jul-01	17:37:16	554.4	556.0	555.3	556.8
17-Jul-01	17:37:18	554.4	555.9	555.3	556.8
17-Jul-01	17:37:20	554.4	555.9	555.4	556.8
17-Jul-01	17:37:22	554.4	555.9	555.4	556.8
17-Jul-01	17:37:24	554.4	555.9	555.3	556.8
17-Jul-01	17:37:26	554.4	555.9	555.3	556.8
17-Jul-01	17:37:28	554.4	555.9	555.3	556.7
17-Jul-01	17:37:30	554.4	556.0	555.3	556.8
17-Jul-01	17:37:32	554.4	556.1	555.3	556.8
17-Jul-01	17:37:34	554.5	556.0	555.3	556.8
17-Jul-01	17:37:36	554.4	556.0	555.3	556.8
17-Jul-01	17:37:38	554.4	556.0	555.3	556.8
17-Jul-01	17:37:40	554.4	556.0	555.3	556.8
17-Jul-01	17:37:42	554.4	556.0	555.3	556.8
17-Jul-01	17:37:44	554.4	556.0	555.3	556.8
17-Jul-01	17:37:46	554.4	556.0	555.3	556.8
17-Jul-01	17:37:48	554.4	555.9	555.3	556.9
17-Jul-01	17:37:50	554.4	555.9	555.3	556.9
17-Jul-01	17:37:52	554.4	555.9	555.3	556.9
17-Jul-01	17:37:54	554.4	555.9	555.3	556.9
17-Jul-01	17:37:56	554.4	555.9	555.3	556.8
17-Jul-01	17:37:58	554.3	555.9	555.3	556.8
17-Jul-01	17:38:00	554.4	555.9	555.3	556.8
17-Jul-01	17:38:02	554.4	556.0	555.3	556.8
17-Jul-01	17:38:04	554.4	555.9	555.3	556.8
17-Jul-01	17:38:06	554.3	555.9	555.4	556.8
17-Jul-01	17:38:08	554.3	555.9	555.4	556.8
17-Jul-01	17:38:10	554.4	555.9	555.4	556.8
17-Jul-01	17:38:12	554.5	555.9	555.4	556.8
17-Jul-01	17:38:14	554.5	555.9	555.4	556.8
17-Jul-01	17:38:16	554.4	555.9	555.4	556.9
17-Jul-01	17:38:18	554.4	556.0	555.4	556.9
17-Jul-01	17:38:20	554.4	555.9	555.4	556.9
17-Jul-01	17:38:22	554.4	555.9	555.5	556.9
17-Jul-01	17:38:24	554.5	556.0	555.5	556.9
17-Jul-01	17:38:26	554.5	556.0	555.5	556.9
17-Jul-01	17:38:28	554.5	556.0	555.5	556.9
17-Jul-01	17:38:30	554.5	556.2	555.4	557.0
17-Jul-01	17:38:32	554.5	556.1	555.5	556.9
17-Jul-01	17:38:34	554.5	556.0	555.4	557.0
17-Jul-01	17:38:36	554.6	556.1	555.4	556.9
17-Jul-01	17:38:38	554.6	556.1	555.5	556.9
17-Jul-01	17:38:40	554.6	556.2	555.4	557.0
17-Jul-01	17:38:42	554.6	556.1	555.5	557.0
17-Jul-01	17:38:44	554.6	556.1	555.4	556.9
17-Jul-01	17:38:46	554.5	556.1	555.4	556.9
17-Jul-01	17:38:48	554.5	556.1	555.4	556.9
17-Jul-01	17:38:50	554.5	556.1	555.4	556.9
17-Jul-01	17:38:52	554.5	556.1	555.3	556.8

Table 2
Catawba Unit 2 Loop Cold Leg Temperature Data

17-Jul-01	17:38:54	554.5	556.1	555.3	556.9
17-Jul-01	17:38:56	554.4	556.1	555.2	556.8
17-Jul-01	17:38:58	554.4	556.1	555.3	556.8
17-Jul-01	17:39:00	554.4	556.1	555.3	556.8
17-Jul-01	17:39:02	554.4	556.0	555.3	556.9
17-Jul-01	17:39:04	554.3	556.0	555.4	556.9
17-Jul-01	17:39:06	554.3	556.0	555.3	556.9
17-Jul-01	17:39:08	554.3	556.0	555.3	556.8
17-Jul-01	17:39:10	554.4	556.0	555.3	556.8
17-Jul-01	17:39:12	554.4	556.0	555.3	556.8
17-Jul-01	17:39:14	554.4	556.0	555.3	556.8
17-Jul-01	17:39:16	554.4	556.0	555.3	556.8
17-Jul-01	17:39:18	554.4	556.0	555.3	556.9
17-Jul-01	17:39:20	554.5	556.0	555.4	556.9
17-Jul-01	17:39:22	554.4	556.0	555.3	556.9
17-Jul-01	17:39:24	554.4	556.0	555.3	556.8
17-Jul-01	17:39:26	554.5	556.1	555.3	556.8
17-Jul-01	17:39:28	554.5	556.1	555.2	556.8
17-Jul-01	17:39:30	554.4	556.0	555.3	556.9
17-Jul-01	17:39:32	554.5	556.1	555.3	556.8
17-Jul-01	17:39:34	554.4	556.0	555.4	556.8
17-Jul-01	17:39:36	554.4	556.0	555.4	556.9
17-Jul-01	17:39:38	554.4	556.0	555.3	556.9
17-Jul-01	17:39:40	554.4	556.0	555.3	556.9
17-Jul-01	17:39:42	554.4	555.9	555.3	556.8
17-Jul-01	17:39:44	554.4	555.9	555.3	556.8
17-Jul-01	17:39:46	554.4	555.9	555.3	556.8
17-Jul-01	17:39:48	554.5	555.9	555.2	556.8
17-Jul-01	17:39:50	554.4	555.9	555.3	556.8
17-Jul-01	17:39:52	554.4	556.0	555.2	556.8
17-Jul-01	17:39:54	554.4	555.9	555.3	556.9
17-Jul-01	17:39:56	554.4	556.0	555.3	556.9
17-Jul-01	17:39:58	554.4	556.0	555.3	557.0
17-Jul-01	17:40:00	554.4	556.0	555.4	556.9
17-Jul-01	17:40:02	554.5	556.0	555.4	556.9
17-Jul-01	17:40:04	554.5	556.0	555.4	556.9
17-Jul-01	17:40:06	554.5	556.1	555.3	557.0
17-Jul-01	17:40:08	554.5	556.1	555.4	557.0
17-Jul-01	17:40:10	554.5	556.1	555.4	557.0
17-Jul-01	17:40:12	554.5	556.1	555.4	557.0
17-Jul-01	17:40:14	554.6	556.1	555.4	557.0
17-Jul-01	17:40:16	554.5	556.1	555.4	557.0
17-Jul-01	17:40:18	554.5	556.0	555.5	557.0
17-Jul-01	17:40:20	554.6	556.0	555.5	557.0
17-Jul-01	17:40:22	554.6	556.0	555.5	557.0
17-Jul-01	17:40:24	554.6	556.1	555.5	557.0
17-Jul-01	17:40:26	554.6	556.1	555.4	557.0
17-Jul-01	17:40:28	554.6	556.1	555.4	557.0
17-Jul-01	17:40:30	554.5	556.2	555.4	557.0
17-Jul-01	17:40:32	554.5	556.2	555.5	557.0
17-Jul-01	17:40:34	554.5	556.2	555.5	557.0
17-Jul-01	17:40:36	554.6	556.1	555.5	557.0
17-Jul-01	17:40:38	554.6	556.2	555.5	557.0
17-Jul-01	17:40:40	554.6	556.2	555.5	557.0
17-Jul-01	17:40:42	554.6	556.2	555.5	557.0
17-Jul-01	17:40:44	554.6	556.2	555.5	557.0
17-Jul-01	17:40:46	554.5	556.1	555.5	557.0
17-Jul-01	17:40:48	554.6	556.1	555.5	557.0
17-Jul-01	17:40:50	554.6	556.1	555.5	557.0
17-Jul-01	17:40:52	554.6	556.2	555.5	557.0
17-Jul-01	17:40:54	554.6	556.2	555.5	557.0
17-Jul-01	17:40:56	554.6	556.1	555.5	557.1
17-Jul-01	17:40:58	554.6	556.2	555.6	557.1
17-Jul-01	17:41:00	554.6	556.1	555.5	557.0
17-Jul-01	17:41:02	554.6	556.0	555.6	557.0
17-Jul-01	17:41:04	554.6	556.0	555.6	557.0
17-Jul-01	17:41:06	554.6	556.0	555.6	556.9
17-Jul-01	17:41:08	554.6	556.1	555.6	557.0
17-Jul-01	17:41:10	554.5	556.1	555.5	556.9
17-Jul-01	17:41:12	554.5	556.1	555.4	556.9
17-Jul-01	17:41:14	554.5	556.0	555.4	557.0
17-Jul-01	17:41:16	554.5	556.1	555.3	557.0
17-Jul-01	17:41:18	554.5	556.1	555.3	557.0

Table 2
Catawba Unit 2 Loop Cold Leg Temperature Data

17-Jul-01	17:41:20	554.5	556.0	555.3	556.9
17-Jul-01	17:41:22	554.5	555.9	555.4	556.9
17-Jul-01	17:41:24	554.5	556.0	555.4	556.9
17-Jul-01	17:41:26	554.5	556.1	555.4	556.8
17-Jul-01	17:41:28	554.4	556.0	555.4	556.8
17-Jul-01	17:41:30	554.4	556.0	555.5	556.8
17-Jul-01	17:41:32	554.5	556.0	555.5	556.8
17-Jul-01	17:41:34	554.5	556.0	555.4	556.8
17-Jul-01	17:41:36	554.5	556.0	555.4	556.8
17-Jul-01	17:41:38	554.5	556.0	555.5	556.8
17-Jul-01	17:41:40	554.5	556.0	555.4	556.9
17-Jul-01	17:41:42	554.5	556.0	555.3	556.9
17-Jul-01	17:41:44	554.5	556.0	555.3	556.9
17-Jul-01	17:41:46	554.5	556.0	555.4	556.9
17-Jul-01	17:41:48	554.5	556.1	555.3	556.8
17-Jul-01	17:41:50	554.4	556.1	555.4	556.9
17-Jul-01	17:41:52	554.4	556.0	555.4	556.9
17-Jul-01	17:41:54	554.5	556.0	555.3	556.9
17-Jul-01	17:41:56	554.5	556.1	555.3	556.9
17-Jul-01	17:41:58	554.5	556.0	555.4	556.9
17-Jul-01	17:42:00	554.5	556.1	555.4	556.9
17-Jul-01	17:42:02	554.5	556.1	555.4	556.9
17-Jul-01	17:42:04	554.5	556.2	555.4	556.9
17-Jul-01	17:42:06	554.5	556.2	555.4	556.9
17-Jul-01	17:42:08	554.6	556.2	555.4	557.0
17-Jul-01	17:42:10	554.6	556.2	555.4	557.0
17-Jul-01	17:42:12	554.6	556.2	555.5	557.0
17-Jul-01	17:42:14	554.6	556.2	555.5	557.0
17-Jul-01	17:42:16	554.6	556.2	555.5	557.0
17-Jul-01	17:42:18	554.6	556.2	555.5	557.0
17-Jul-01	17:42:20	554.6	556.1	555.5	557.0
17-Jul-01	17:42:22	554.6	556.1	555.5	557.0
17-Jul-01	17:42:24	554.6	556.1	555.6	557.1
17-Jul-01	17:42:26	554.6	556.1	555.6	557.1
17-Jul-01	17:42:28	554.6	556.1	555.6	557.0
17-Jul-01	17:42:30	554.6	556.2	555.5	557.0
17-Jul-01	17:42:32	554.6	556.2	555.5	557.0
17-Jul-01	17:42:34	554.6	556.2	555.5	557.0
17-Jul-01	17:42:36	554.6	556.2	555.5	557.0
17-Jul-01	17:42:38	554.6	556.2	555.5	556.9
17-Jul-01	17:42:40	554.6	556.2	555.4	556.9
17-Jul-01	17:42:42	554.5	556.1	555.4	556.9
17-Jul-01	17:42:44	554.6	556.2	555.4	556.9
17-Jul-01	17:42:46	554.5	556.2	555.4	557.0
17-Jul-01	17:42:48	554.5	556.2	555.4	557.0
17-Jul-01	17:42:50	554.5	556.2	555.4	557.0
17-Jul-01	17:42:52	554.5	556.2	555.5	557.0
17-Jul-01	17:42:54	554.5	556.1	555.5	557.0
17-Jul-01	17:42:56	554.4	556.1	555.5	557.0
17-Jul-01	17:42:58	554.5	556.1	555.5	557.0
17-Jul-01	17:43:00	554.5	556.0	555.6	556.9
17-Jul-01	17:43:02	554.5	556.0	555.5	557.0
17-Jul-01	17:43:04	554.4	556.0	555.4	556.9
17-Jul-01	17:43:06	554.5	556.1	555.4	556.9
17-Jul-01	17:43:08	554.4	556.1	555.5	556.9
17-Jul-01	17:43:10	554.4	556.1	555.4	556.9
17-Jul-01	17:43:12	554.4	556.1	555.4	556.9
17-Jul-01	17:43:14	554.4	556.2	555.4	556.9
17-Jul-01	17:43:16	554.4	556.2	555.4	556.9
17-Jul-01	17:43:18	554.4	556.1	555.4	556.9
17-Jul-01	17:43:20	554.4	556.1	555.3	556.9
17-Jul-01	17:43:22	554.4	556.0	555.3	556.9
17-Jul-01	17:43:24	554.4	556.0	555.3	556.8
17-Jul-01	17:43:26	554.4	556.1	555.3	556.9
17-Jul-01	17:43:28	554.4	556.1	555.4	556.9
17-Jul-01	17:43:30	554.5	556.1	555.4	556.9
17-Jul-01	17:43:32	554.4	556.1	555.3	556.9
17-Jul-01	17:43:34	554.4	556.1	555.3	556.9
17-Jul-01	17:43:36	554.5	556.0	555.3	556.9
17-Jul-01	17:43:38	554.4	556.0	555.3	556.9
17-Jul-01	17:43:40	554.4	556.0	555.3	556.9
17-Jul-01	17:43:42	554.4	556.0	555.3	556.9
17-Jul-01	17:43:44	554.5	556.0	555.3	556.9

Table 2
Catawba Unit 2 Loop Cold Leg Temperature Data

17-Jul-01	17:43:46	554.5	556.0	555.3	556.8
17-Jul-01	17:43:48	554.5	556.0	555.3	556.8
17-Jul-01	17:43:50	554.4	556.0	555.3	556.8
17-Jul-01	17:43:52	554.4	556.0	555.2	556.9
17-Jul-01	17:43:54	554.4	556.0	555.2	556.9
17-Jul-01	17:43:56	554.4	556.0	555.1	556.9
17-Jul-01	17:43:58	554.4	556.1	555.2	556.9
17-Jul-01	17:44:00	554.4	556.1	555.2	556.9
17-Jul-01	17:44:02	554.4	556.0	555.2	556.8
17-Jul-01	17:44:04	554.5	556.0	555.3	556.8
17-Jul-01	17:44:06	554.4	556.0	555.3	556.8
17-Jul-01	17:44:08	554.4	556.0	555.3	556.8
17-Jul-01	17:44:10	554.4	556.0	555.3	556.8

Table 3
Catawba Unit 2 Loop Elbow Tap ΔP Data

		Loop A Elbow Tap dp, inches H2O			Loop B Elbow Tap dp, inches H2O			Loop C Elbow Tap dp, inches H2O			Loop D Elbow Tap dp, inches H2O		
		Ch 1	Ch 2	Ch 3	Ch 1	Ch 2	Ch 3	Ch 1	Ch 2	Ch 3	Ch 1	Ch 2	Ch 3
DATE	TIME	C2A0677	C2A0869	C2A0875	C2A0683	C2A0890	C2A0896	C2A0689	C2A0891	C2A0897	C2A0695	C2A0892	C2A0898
17-Jul-01	17:34:10	306.8	329.8	313.1	314.5	353.0	312.4	301.5	340.5	327.4	327.6	330.6	327.5
17-Jul-01	17:34:12	303.6	328.0	312.1	314.8	351.2	309.8	303.0	341.8	328.8	327.6	332.0	329.2
17-Jul-01	17:34:14	302.9	326.9	311.8	314.8	352.5	313.0	302.6	341.4	327.7	325.4	332.0	328.4
17-Jul-01	17:34:16	305.2	329.1	313.1	316.2	351.1	310.8	299.5	339.9	326.2	327.3	330.5	327.7
17-Jul-01	17:34:18	304.8	328.2	313.3	314.8	351.7	311.8	301.4	339.5	326.6	326.9	330.6	327.3
17-Jul-01	17:34:20	306.4	329.7	312.7	316.5	353.2	313.1	301.6	339.9	326.1	326.9	330.4	328.1
17-Jul-01	17:34:22	303.2	325.6	309.0	313.3	352.8	312.1	303.2	339.9	326.1	327.6	332.8	329.7
17-Jul-01	17:34:24	303.3	327.1	311.8	315.2	352.3	312.7	300.4	339.0	325.5	325.8	330.0	327.6
17-Jul-01	17:34:26	303.8	327.0	310.1	319.3	352.1	312.4	300.3	338.3	324.7	328.6	331.1	328.6
17-Jul-01	17:34:28	303.4	327.9	311.5	316.0	355.0	314.6	298.7	336.1	322.8	323.6	328.8	325.3
17-Jul-01	17:34:30	305.8	329.6	314.1	316.2	352.5	311.2	302.6	338.3	325.0	324.6	327.9	325.4
17-Jul-01	17:34:32	303.3	326.3	310.1	314.6	348.1	308.9	298.1	337.3	323.9	325.8	328.8	325.8
17-Jul-01	17:34:34	306.1	329.4	313.2	316.4	353.1	312.5	302.7	338.7	325.6	327.8	332.5	329.2
17-Jul-01	17:34:36	302.9	327.1	311.2	314.1	351.3	311.4	301.3	338.3	324.5	328.0	330.4	328.4
17-Jul-01	17:34:38	305.2	329.0	312.0	315.8	352.1	312.3	302.4	338.1	325.0	327.2	332.4	328.6
17-Jul-01	17:34:40	304.3	328.1	312.8	315.0	353.7	313.3	300.1	335.6	322.7	326.2	330.7	328.6
17-Jul-01	17:34:42	302.6	326.8	311.8	318.5	357.1	315.4	298.8	337.7	324.4	329.4	333.6	331.1
17-Jul-01	17:34:44	301.2	325.0	308.8	313.3	352.9	312.3	299.6	338.8	325.6	328.0	331.1	327.8
17-Jul-01	17:34:46	302.6	326.7	310.1	316.6	352.5	311.7	301.4	339.0	325.9	327.3	330.1	326.8
17-Jul-01	17:34:48	303.7	326.4	311.2	312.9	351.5	311.4	300.2	338.4	325.2	325.3	330.0	326.4
17-Jul-01	17:34:50	303.6	326.8	311.6	316.7	353.9	313.2	301.0	339.1	325.7	326.6	329.5	325.9
17-Jul-01	17:34:52	306.7	330.3	314.1	315.1	356.0	315.4	301.5	338.9	325.6	326.6	330.3	328.1
17-Jul-01	17:34:54	304.2	327.3	311.8	316.2	351.6	311.5	298.2	334.1	321.6	327.1	329.5	327.6
17-Jul-01	17:34:56	303.9	327.1	311.0	314.5	353.7	312.4	300.0	335.3	322.2	327.2	330.5	327.9
17-Jul-01	17:34:58	304.3	327.9	312.7	312.8	353.3	313.3	302.8	340.2	326.8	328.7	332.9	330.0
17-Jul-01	17:35:00	303.9	326.5	311.0	313.6	353.2	313.5	300.5	338.0	324.8	326.7	330.3	327.6
17-Jul-01	17:35:02	303.8	326.8	310.7	321.5	352.1	312.2	300.1	338.8	325.1	328.1	331.6	328.7
17-Jul-01	17:35:04	303.7	327.3	311.5	316.2	354.1	313.8	301.2	338.0	324.6	325.0	328.3	326.9
17-Jul-01	17:35:06	305.5	328.5	312.0	316.2	350.9	310.0	302.0	340.0	326.6	329.7	333.9	331.3
17-Jul-01	17:35:08	302.0	325.9	310.9	314.7	351.6	311.7	299.3	336.0	322.5	325.3	328.8	325.5
17-Jul-01	17:35:10	305.4	328.6	313.0	315.6	353.2	313.4	302.2	339.0	326.1	326.3	331.6	329.3
17-Jul-01	17:35:12	307.2	330.7	314.4	318.8	353.1	313.1	299.0	336.2	323.2	327.3	331.0	327.6
17-Jul-01	17:35:14	304.1	326.9	309.8	316.0	355.3	315.1	300.3	337.9	324.2	325.9	329.7	326.7
17-Jul-01	17:35:16	306.6	329.7	313.8	318.8	354.3	313.6	300.9	338.3	325.2	328.5	331.5	328.1
17-Jul-01	17:35:18	306.1	329.8	313.1	314.7	354.1	313.8	299.8	338.4	325.2	327.0	331.8	329.6
17-Jul-01	17:35:20	304.9	327.5	311.7	316.2	353.5	312.8	299.8	336.6	323.7	323.9	328.0	325.6
17-Jul-01	17:35:22	306.1	328.9	312.8	315.2	353.2	312.8	300.7	339.2	325.2	326.3	331.1	328.7
17-Jul-01	17:35:24	302.9	326.2	310.0	315.5	353.5	312.6	300.1	339.8	326.6	325.9	330.8	327.7
17-Jul-01	17:35:26	300.8	324.6	307.9	317.1	355.6	315.3	301.1	338.1	324.2	326.1	331.1	328.8
17-Jul-01	17:35:28	305.6	329.4	313.9	316.9	353.2	313.9	301.5	338.7	325.8	327.4	331.6	329.6
17-Jul-01	17:35:30	302.9	326.3	310.8	315.8	354.0	313.5	301.6	339.5	325.9	325.6	329.3	326.3
17-Jul-01	17:35:32	303.9	327.9	311.9	316.2	352.3	312.4	301.2	339.9	326.5	326.6	330.7	328.5
17-Jul-01	17:35:34	304.2	327.1	310.6	316.4	353.4	312.9	300.0	340.1	326.3	326.5	330.9	328.1
17-Jul-01	17:35:36	303.1	326.0	310.7	316.5	351.9	311.4	300.2	338.6	325.2	328.0	332.4	329.4
17-Jul-01	17:35:38	303.5	327.4	311.5	316.3	351.6	310.6	302.0	340.3	326.3	327.3	330.0	327.1
17-Jul-01	17:35:40	303.7	327.4	311.9	316.1	354.6	314.5	301.6	338.6	325.0	326.3	331.2	328.4
17-Jul-01	17:35:42	303.3	326.5	311.4	317.3	355.3	314.5	302.3	337.7	324.2	326.1	329.4	326.2
17-Jul-01	17:35:44	304.2	326.9	311.1	316.7	355.0	314.1	302.5	340.0	326.0	328.5	332.3	329.4
17-Jul-01	17:35:46	304.0	326.9	310.9	315.5	354.0	313.5	300.3	336.6	323.7	327.3	332.1	329.1
17-Jul-01	17:35:48	301.7	325.7	309.7	316.6	351.5	311.2	300.4	340.3	327.3	325.8	329.2	326.7
17-Jul-01	17:35:50	303.0	326.7	310.7	317.0	353.8	313.2	302.9	339.1	325.0	327.3	330.5	327.0
17-Jul-01	17:35:52	302.0	325.9	309.5	319.4	358.1	317.3	300.1	336.5	323.6	328.5	331.3	328.1
17-Jul-01	17:35:54	306.2	329.1	312.6	316.2	356.0	315.2	300.1	336.0	322.9	325.5	329.5	326.7
17-Jul-01	17:35:56	303.7	327.6	311.7	316.9	353.8	313.6	303.4	341.1	327.6	327.8	332.4	329.9
17-Jul-01	17:35:58	305.0	329.3	313.0	315.9	355.5	314.5	301.5	338.1	325.1	327.6	331.1	328.4
17-Jul-01	17:36:00	307.2	330.3	315.0	313.9	353.4	313.8	302.3	338.5	325.1	329.5	333.6	330.9
17-Jul-01	17:36:02	300.7	324.7	310.3	316.7	357.1	316.1	302.3	340.5	327.0	330.9	333.9	330.1
17-Jul-01	17:36:04	307.4	330.4	314.7	320.0	356.3	316.7	303.1	341.8	327.7	327.8	332.9	330.6
17-Jul-01	17:36:06	305.2	329.4	312.8	317.3	353.7	312.8	301.0	340.0	326.4	330.1	334.5	331.9
17-Jul-01	17:36:08	306.9	330.5	313.4	319.1	353.2	312.4	301.6	339.0	325.3	329.5	333.1	329.8
17-Jul-01	17:36:10	305.2	329.4	313.5	317.4	355.2	314.8	301.6	340.9	327.4	330.2	334.5	331.8
17-Jul-01	17:36:12	302.2	326.4	312.2	317.3	353.9	312.8	303.8	342.1	327.6	328.0	331.7	328.2
17-Jul-01	17:36:14	306.5	328.8	312.8	315.0	355.0	313.9	303.8	340.7	327.1	327.3	329.0	327.6
17-Jul-01	17:36:16	302.4	326.5	311.5	314.8	350.6	310.0	299.8	337.7	324.4	329.1	331.4	329.1
17-Jul-01	17:36:18	304.5	327.9	312.2	313.4	354.4	313.9	298.1	336.9	323.8	326.8	329.8	326.5
17-Jul-01	17:36:20	306.1	328.7	313.1	316.5	352.6	312.6	304.0	339.9	326.6	327.3	330.5	326.9
17-Jul-01	17:36:22	305.3	328.7	313.1	321.0	353.3	312.7	301.5	339.0	326.0	327.6	332.4	329.0
17-Jul-01	17:36:24	304.3	328.5	312.3	316.7	352.2	311.7	296.3	335.6	322.6	326.4	330.2	327.6

Table 3
Catawba Unit 2 Loop Elbow Tap ΔP Data

17-Jul-01	17:36:26	303.3	327.4	311.8	318.1	353.5	312.9	298.3	335.3	322.7	327.0	330.1	326.7
17-Jul-01	17:36:28	302.9	326.6	311.9	317.1	356.2	315.4	297.6	335.4	322.2	328.0	330.5	327.3
17-Jul-01	17:36:30	305.1	328.6	313.9	314.1	350.2	310.8	303.5	340.9	326.8	325.0	329.9	327.7
17-Jul-01	17:36:32	304.5	327.7	311.8	312.9	354.6	313.7	299.3	335.9	322.6	327.1	330.9	328.0
17-Jul-01	17:36:34	299.5	322.6	307.9	313.9	353.4	313.1	298.7	338.9	325.4	330.0	333.2	329.9
17-Jul-01	17:36:36	304.6	327.9	310.5	315.6	353.9	313.5	300.3	336.8	323.8	330.4	334.1	330.8
17-Jul-01	17:36:38	308.7	331.7	316.0	316.2	351.1	311.1	298.3	338.6	325.4	327.2	330.6	328.3
17-Jul-01	17:36:40	307.7	330.9	315.0	314.8	350.0	310.2	300.7	337.5	323.7	327.4	330.5	327.2
17-Jul-01	17:36:42	302.3	325.6	309.2	316.9	357.6	316.5	300.8	339.9	326.9	326.4	331.2	327.9
17-Jul-01	17:36:44	304.8	328.5	312.5	316.8	356.5	315.8	299.7	336.8	323.8	328.3	331.9	329.5
17-Jul-01	17:36:46	303.3	327.1	311.8	314.8	352.8	311.8	300.2	338.4	324.6	328.2	332.6	328.9
17-Jul-01	17:36:48	302.3	325.6	309.4	314.9	350.5	311.2	300.3	337.5	324.4	327.1	331.2	328.1
17-Jul-01	17:36:50	305.3	328.0	312.2	316.4	352.2	311.9	300.7	339.8	325.9	327.0	329.7	326.7
17-Jul-01	17:36:52	305.8	329.1	313.3	316.5	354.1	313.9	298.5	331.7	318.4	327.5	331.3	328.4
17-Jul-01	17:36:54	306.1	329.7	313.5	315.0	351.4	311.0	301.7	336.9	323.5	327.8	331.3	328.6
17-Jul-01	17:36:56	305.8	329.0	312.8	315.0	355.0	314.2	301.5	338.4	325.0	327.3	331.7	328.4
17-Jul-01	17:36:58	306.0	329.8	313.8	316.1	352.7	312.4	299.9	337.8	324.3	327.7	331.1	328.7
17-Jul-01	17:37:00	305.0	327.8	312.4	313.3	352.8	312.8	302.3	340.5	327.0	328.3	332.6	330.0
17-Jul-01	17:37:02	302.6	326.3	309.0	312.2	354.5	313.8	301.9	339.5	325.9	326.6	329.1	325.4
17-Jul-01	17:37:04	304.2	328.4	313.4	314.8	353.0	313.0	302.3	340.2	326.9	329.6	332.9	330.5
17-Jul-01	17:37:06	303.7	327.2	310.7	315.4	352.2	311.1	302.9	340.5	327.4	324.6	329.6	326.7
17-Jul-01	17:37:08	302.7	326.7	310.7	313.5	352.0	311.7	301.4	336.7	322.7	326.3	330.4	327.1
17-Jul-01	17:37:10	302.8	326.4	310.4	317.0	353.7	312.5	303.7	341.7	328.3	329.0	331.7	329.2
17-Jul-01	17:37:12	302.1	325.3	310.3	316.1	348.3	308.2	302.4	340.7	326.9	328.8	331.5	328.6
17-Jul-01	17:37:14	305.1	328.8	312.9	315.7	351.0	311.4	301.5	338.6	325.0	325.3	329.1	326.3
17-Jul-01	17:37:16	304.4	328.3	312.2	314.5	352.2	312.1	301.6	338.9	325.2	324.3	328.9	325.3
17-Jul-01	17:37:18	303.0	325.8	310.1	312.6	351.6	311.9	300.4	339.8	326.6	326.2	330.5	327.2
17-Jul-01	17:37:20	303.1	325.3	310.1	312.2	353.7	313.3	302.2	339.5	326.4	327.5	331.7	329.2
17-Jul-01	17:37:22	304.7	327.8	312.1	313.4	353.0	312.4	300.1	338.3	325.1	325.5	330.3	326.8
17-Jul-01	17:37:24	303.5	327.6	312.2	314.4	350.2	310.2	300.7	338.9	325.6	325.6	329.3	326.7
17-Jul-01	17:37:26	305.2	328.8	312.8	316.9	354.6	314.6	300.3	340.4	327.3	326.8	331.6	328.2
17-Jul-01	17:37:28	304.9	328.0	312.5	318.0	354.6	314.1	301.8	336.8	323.1	326.5	330.8	328.0
17-Jul-01	17:37:30	303.9	327.6	311.6	313.3	351.8	311.1	303.4	339.7	326.7	329.7	333.1	329.8
17-Jul-01	17:37:32	303.4	326.3	311.1	312.8	352.7	312.9	298.1	337.2	323.4	325.9	330.0	327.3
17-Jul-01	17:37:34	303.4	326.8	311.0	313.2	352.1	312.0	301.3	336.9	323.4	325.4	329.7	327.1
17-Jul-01	17:37:36	301.9	325.9	309.7	316.8	350.8	311.1	302.1	339.2	325.5	327.9	332.8	329.8
17-Jul-01	17:37:38	304.4	328.6	313.2	316.2	355.6	314.7	299.6	337.5	324.9	327.6	331.0	327.9
17-Jul-01	17:37:40	301.4	324.6	309.3	313.8	350.7	310.8	299.3	336.5	323.4	327.2	331.1	328.1
17-Jul-01	17:37:42	303.8	327.1	310.6	316.9	355.0	314.2	301.0	338.0	324.6	329.0	333.0	330.0
17-Jul-01	17:37:44	304.3	327.3	311.8	312.3	349.4	309.6	303.1	341.3	327.8	326.3	330.4	327.6
17-Jul-01	17:37:46	303.9	327.4	311.5	320.2	354.8	314.3	300.4	336.8	324.2	325.4	329.2	325.9
17-Jul-01	17:37:48	306.6	329.9	313.3	312.6	351.2	310.9	298.4	338.0	324.3	327.8	332.1	329.1
17-Jul-01	17:37:50	301.5	324.8	308.0	316.6	352.5	312.3	301.0	336.9	323.5	326.9	330.0	326.4
17-Jul-01	17:37:52	301.8	324.4	308.1	316.4	356.7	316.0	299.2	336.4	323.5	325.1	328.9	326.6
17-Jul-01	17:37:54	303.7	326.8	310.5	313.9	350.3	310.3	299.4	338.4	324.9	327.2	329.7	327.5
17-Jul-01	17:37:56	306.3	329.2	314.2	316.4	351.6	310.7	301.9	337.6	324.9	329.6	332.2	329.4
17-Jul-01	17:37:58	304.6	328.8	312.2	315.4	348.4	308.9	299.9	338.7	325.3	327.2	330.7	327.3
17-Jul-01	17:38:00	306.0	329.3	312.6	317.0	353.6	313.5	300.6	337.2	323.8	329.8	332.4	329.0
17-Jul-01	17:38:02	306.1	329.8	314.1	315.5	350.8	310.1	302.4	337.4	324.3	326.4	330.3	327.5
17-Jul-01	17:38:04	303.2	326.9	311.4	316.7	356.0	315.2	300.1	339.0	325.0	327.6	331.2	328.4
17-Jul-01	17:38:06	304.6	327.7	311.8	315.0	351.9	311.9	300.2	338.4	325.7	325.6	329.1	327.5
17-Jul-01	17:38:08	305.1	329.2	312.8	313.6	352.5	312.8	303.2	340.8	327.3	327.1	330.0	327.9
17-Jul-01	17:38:10	304.2	327.7	311.4	318.0	358.9	318.4	301.6	340.3	326.6	328.2	332.9	329.6
17-Jul-01	17:38:12	307.9	331.1	315.0	315.9	357.2	316.6	303.4	343.6	330.0	330.6	335.2	332.0
17-Jul-01	17:38:14	304.2	327.9	311.8	318.1	354.5	314.4	302.2	340.5	327.2	328.0	332.3	329.5
17-Jul-01	17:38:16	306.3	329.6	313.9	314.9	354.5	313.2	303.2	339.3	325.8	329.1	333.5	330.4
17-Jul-01	17:38:18	306.2	329.7	313.7	317.2	352.2	312.0	303.0	341.5	328.1	329.1	333.6	330.6
17-Jul-01	17:38:20	305.3	329.4	312.9	316.8	355.4	314.4	302.8	341.3	327.8	330.9	335.9	332.6
17-Jul-01	17:38:22	304.6	327.5	311.4	320.7	355.3	315.5	302.3	338.9	325.5	329.1	333.6	330.7
17-Jul-01	17:38:24	306.6	330.0	314.4	316.2	351.6	312.3	304.3	342.4	329.3	330.3	333.0	331.0
17-Jul-01	17:38:26	304.4	329.5	313.6	318.2	356.9	316.8	302.5	340.0	326.5	330.1	334.3	331.8
17-Jul-01	17:38:28	306.4	331.2	315.4	317.3	353.7	314.2	303.1	340.9	327.6	328.7	332.8	329.2
17-Jul-01	17:38:30	304.8	329.0	313.3	319.9	355.8	315.6	300.5	338.4	324.8	328.7	333.9	331.0
17-Jul-01	17:38:32	306.6	330.5	313.1	319.3	354.9	314.5	302.4	339.3	326.0	328.8	333.0	330.6
17-Jul-01	17:38:34	307.2	331.2	315.0	318.8	363.2	322.2	300.6	338.5	325.9	331.5	336.3	332.7
17-Jul-01	17:38:36	306.6	330.0	315.3	315.8	354.6	314.0	301.4	339.5	326.1	330.9	335.0	332.8
17-Jul-01	17:38:38	306.1	329.5	312.9	315.5	353.9	313.4	302.2	339.6	327.1	329.5	332.8	329.1
17-Jul-01	17:38:40	302.5	326.9	312.1	312.7	350.8	311.1	298.6	338.6	325.6	326.6	329.8	327.8
17-Jul-01	17:38:42	306.8	329.6	313.4	316.3	352.6	312.6	300.2	336.7	323.2	324.1	329.8	327.1
17-Jul-01	17:38:44	304.4	327.7	310.8	317.1	356.0	315.1	301.5	338.1	325.1	327.0	330.4	327.9
17-Jul-01	17:38:46	302.8	324.4	309.4	314.1	351.8	311.1	302.9	339.6	325.7	328.1	331.4	328.6
17-Jul-01	17:38:48	304.3	327.7	311.7	320.2	352.8	312.8	299.6	337.4	324.1	327.3	330.1	327.1
17-Jul-01	17:38:50	305.5	329.1	312.6	316.4	353.3	313.1	301.8	338.0	324.7	329.8	332.4	329.0

Table 3
Catawba Unit 2 Loop Elbow Tap ΔP Data

17-Jul-01	17:38:52	302.0	325.7	310.6	314.1	351.2	310.8	300.4	337.8	324.1	326.3	329.8	327.0
17-Jul-01	17:38:54	304.4	327.8	311.9	315.8	351.9	311.9	298.9	335.4	322.5	327.0	331.1	328.8
17-Jul-01	17:38:56	306.1	330.0	313.9	317.4	354.4	313.0	300.8	339.5	326.3	327.5	331.9	328.1
17-Jul-01	17:38:58	303.3	327.3	312.2	315.4	350.1	310.4	300.6	335.6	322.8	328.0	332.3	329.3
17-Jul-01	17:39:00	302.5	326.2	311.5	313.7	353.1	312.2	303.0	342.7	329.3	326.2	330.1	327.0
17-Jul-01	17:39:02	303.5	327.3	311.8	315.3	353.1	312.7	299.5	338.8	325.5	326.7	331.6	328.8
17-Jul-01	17:39:04	303.1	326.6	312.4	314.8	352.9	312.6	302.4	339.7	325.8	329.0	333.8	331.4
17-Jul-01	17:39:06	302.7	325.6	309.9	314.1	350.5	310.4	301.8	339.7	326.8	328.8	332.5	328.5
17-Jul-01	17:39:08	304.9	329.4	313.1	315.5	355.4	314.7	302.1	338.6	324.9	328.0	331.1	328.8
17-Jul-01	17:39:10	303.2	326.8	311.4	314.8	348.9	309.1	302.1	337.7	325.1	328.5	332.9	330.7
17-Jul-01	17:39:12	303.8	327.1	311.9	315.1	353.4	313.1	299.4	337.8	324.6	325.5	330.6	327.0
17-Jul-01	17:39:14	304.9	329.3	313.4	317.2	352.6	312.7	302.0	338.1	324.2	327.4	331.4	329.2
17-Jul-01	17:39:16	303.0	326.7	311.0	312.6	353.4	312.4	300.6	337.8	324.7	328.9	334.0	331.1
17-Jul-01	17:39:18	302.5	326.4	310.0	317.3	355.5	314.9	300.5	339.2	325.8	327.4	330.8	329.1
17-Jul-01	17:39:20	301.9	325.9	309.4	314.2	355.1	314.4	299.7	338.4	325.2	326.0	330.4	327.6
17-Jul-01	17:39:22	302.0	326.1	310.0	314.5	352.4	312.2	302.9	340.4	326.8	329.2	333.3	330.0
17-Jul-01	17:39:24	306.0	329.2	313.7	313.8	350.7	310.0	300.4	338.4	325.4	326.0	329.9	327.0
17-Jul-01	17:39:26	304.9	328.2	312.3	314.8	352.5	311.8	305.1	341.2	327.8	327.2	331.9	329.0
17-Jul-01	17:39:28	304.4	328.0	312.6	316.7	357.0	315.5	302.2	341.4	328.1	327.8	330.6	328.8
17-Jul-01	17:39:30	305.5	328.0	312.0	315.4	350.6	310.7	302.3	338.7	325.4	328.3	332.6	329.7
17-Jul-01	17:39:32	304.3	326.6	311.3	313.9	352.5	311.7	303.4	340.8	327.5	327.5	332.7	330.7
17-Jul-01	17:39:34	303.0	325.7	310.0	316.2	353.3	312.9	298.4	337.9	324.9	326.1	329.7	327.2
17-Jul-01	17:39:36	303.6	327.7	311.2	318.5	352.7	312.2	300.4	337.9	324.9	326.3	331.4	328.8
17-Jul-01	17:39:38	303.2	326.2	309.7	314.5	353.0	312.7	299.0	337.1	323.7	327.5	331.4	329.3
17-Jul-01	17:39:40	303.7	327.6	310.8	313.3	354.3	313.7	301.2	337.3	324.5	329.1	332.2	328.3
17-Jul-01	17:39:42	303.5	327.6	312.4	313.1	349.1	309.6	300.7	335.8	322.2	330.4	333.3	330.0
17-Jul-01	17:39:44	304.7	327.9	311.9	314.0	352.8	312.2	300.7	336.5	322.6	325.8	330.5	328.5
17-Jul-01	17:39:46	304.4	327.9	312.5	315.6	352.6	312.7	299.2	338.5	325.5	327.7	331.1	328.7
17-Jul-01	17:39:48	305.7	329.2	313.4	315.4	355.1	314.4	300.0	336.7	323.9	328.1	331.7	329.6
17-Jul-01	17:39:50	304.3	328.2	312.6	315.6	354.3	314.3	299.4	338.7	325.2	330.3	333.9	331.1
17-Jul-01	17:39:52	302.9	326.3	310.1	315.6	354.6	314.2	301.0	338.4	325.4	328.6	331.7	329.1
17-Jul-01	17:39:54	306.8	330.7	314.4	315.7	357.5	317.1	303.4	341.4	328.1	328.2	331.2	328.1
17-Jul-01	17:39:56	306.6	330.1	313.2	318.6	353.8	314.2	303.3	340.8	327.6	330.2	332.9	329.4
17-Jul-01	17:39:58	305.1	328.3	312.6	316.4	353.4	313.1	299.7	338.5	324.5	329.1	333.1	330.0
17-Jul-01	17:40:00	307.9	332.1	315.2	316.5	355.6	314.9	300.3	338.9	326.1	329.8	334.1	331.5
17-Jul-01	17:40:02	308.1	331.6	315.0	316.2	355.7	314.6	301.2	339.6	326.5	327.2	331.2	328.1
17-Jul-01	17:40:04	306.4	330.0	314.3	319.3	356.3	314.5	304.3	342.2	329.3	328.0	332.8	329.5
17-Jul-01	17:40:06	304.1	327.8	311.9	316.8	357.6	316.5	302.4	339.5	326.2	331.9	334.7	332.2
17-Jul-01	17:40:08	306.8	330.8	315.1	316.8	353.9	313.5	300.7	337.5	324.5	331.3	335.3	331.8
17-Jul-01	17:40:10	307.1	330.2	313.8	318.2	357.4	316.4	304.5	340.8	327.0	329.9	334.9	331.9
17-Jul-01	17:40:12	306.1	329.8	313.7	316.2	355.8	315.3	300.2	338.1	325.0	329.6	335.1	332.6
17-Jul-01	17:40:14	305.9	328.7	312.2	316.2	354.1	312.6	303.7	339.9	325.9	330.6	333.9	330.3
17-Jul-01	17:40:16	305.8	329.2	312.9	318.5	353.0	313.0	302.0	339.3	326.0	330.9	335.3	331.5
17-Jul-01	17:40:18	304.0	327.4	311.4	319.7	356.7	316.3	303.0	339.9	326.6	330.3	334.3	331.4
17-Jul-01	17:40:20	310.2	333.6	317.6	317.3	353.7	313.7	301.4	338.6	326.1	327.8	331.9	329.1
17-Jul-01	17:40:22	304.6	328.2	312.4	319.6	357.8	316.5	304.0	340.4	327.2	328.8	333.3	330.7
17-Jul-01	17:40:24	304.5	327.6	312.1	316.7	354.2	313.3	306.6	344.0	330.0	330.0	332.9	329.5
17-Jul-01	17:40:26	306.4	329.6	313.7	320.6	354.0	313.8	302.7	340.4	326.6	328.4	332.8	330.0
17-Jul-01	17:40:28	306.3	329.8	312.8	316.3	358.0	316.4	301.6	339.6	326.0	326.9	330.6	328.4
17-Jul-01	17:40:30	307.7	330.4	314.2	317.1	355.3	314.1	304.2	340.6	327.3	326.0	329.7	327.3
17-Jul-01	17:40:32	306.0	328.6	313.8	316.1	356.9	315.8	302.4	341.8	328.5	329.1	333.2	330.7
17-Jul-01	17:40:34	303.3	326.9	311.0	314.7	354.8	314.8	303.9	342.8	329.3	330.9	336.3	333.4
17-Jul-01	17:40:36	305.0	328.9	313.1	317.3	356.2	314.7	303.4	341.2	327.7	331.0	334.5	331.7
17-Jul-01	17:40:38	306.1	329.3	312.7	316.9	355.1	314.5	300.0	339.3	326.1	329.0	333.4	330.5
17-Jul-01	17:40:40	305.4	328.1	312.6	316.4	355.3	314.6	302.3	341.2	327.8	330.5	335.0	332.7
17-Jul-01	17:40:42	306.1	329.8	314.0	317.2	356.7	316.0	301.6	340.2	326.4	331.2	335.1	332.3
17-Jul-01	17:40:44	306.9	329.8	313.6	316.4	356.5	315.8	304.8	341.3	327.8	329.0	332.7	330.4
17-Jul-01	17:40:46	302.3	326.8	311.7	316.4	355.3	315.0	302.9	342.1	327.9	328.5	333.6	330.7
17-Jul-01	17:40:48	307.3	331.0	315.2	320.3	358.6	317.1	303.4	340.6	327.6	330.5	335.0	332.0
17-Jul-01	17:40:50	304.4	328.8	312.7	314.1	352.1	312.3	301.2	339.3	325.7	329.8	332.9	330.8
17-Jul-01	17:40:52	304.0	328.5	313.5	315.9	355.1	314.9	301.0	337.8	324.6	329.1	332.1	329.3
17-Jul-01	17:40:54	305.8	329.1	312.7	317.7	354.8	314.2	302.3	339.5	325.9	327.9	332.4	329.5
17-Jul-01	17:40:56	306.1	329.9	315.0	319.7	358.3	317.5	304.3	339.6	326.5	328.4	331.3	329.4
17-Jul-01	17:40:58	303.5	326.4	310.4	317.1	356.9	315.1	302.4	338.0	325.0	327.6	332.9	329.9
17-Jul-01	17:41:00	306.6	330.2	314.9	316.5	357.4	315.1	304.1	343.5	329.8	328.7	332.6	329.8
17-Jul-01	17:41:02	303.3	326.9	311.9	316.2	350.8	310.5	298.3	337.2	324.3	329.9	333.1	329.5
17-Jul-01	17:41:04	304.4	327.7	312.1	315.6	351.1	311.5	299.5	337.1	323.5	324.9	328.3	326.3
17-Jul-01	17:41:06	304.6	327.1	311.6	313.5	350.5	310.7	299.4	336.0	323.3	326.7	332.0	329.6
17-Jul-01	17:41:08	302.4	326.4	310.1	316.3	350.9	310.7	302.8	339.7	326.5	325.3	328.9	326.1
17-Jul-01	17:41:10	301.5	325.1	309.3	315.6	351.8	312.1	301.9	340.0	326.5	328.8	332.4	329.2
17-Jul-01	17:41:12	304.5	328.2	313.0	313.5	352.8	312.3	299.9	336.7	324.0	327.2	330.5	328.1
17-Jul-01	17:41:14	305.3	329.1	313.8	312.5	352.5	311.9	300.2	337.2	323.4	327.6	331.3	328.4
17-Jul-01	17:41:16	303.6	328.8	313.0	314.0	351.7	311.7	301.1	339.7	326.1	327.6	332.1	329.2

Table 3
Catawba Unit 2 Loop Elbow Tap ΔP Data

17-Jul-01	17:41:18	303.7	326.6	310.7	313.1	352.4	312.2	301.3	338.3	324.7	327.4	332.9	330.6
17-Jul-01	17:41:20	302.8	325.1	309.5	316.9	352.5	312.3	299.1	338.1	324.9	324.7	328.9	325.2
17-Jul-01	17:41:22	300.1	322.8	306.9	312.1	355.5	314.8	300.8	338.4	325.8	326.1	329.9	326.9
17-Jul-01	17:41:24	304.1	326.8	310.8	314.7	352.3	312.6	302.5	340.6	327.2	326.7	330.2	328.0
17-Jul-01	17:41:26	303.7	327.1	311.5	319.0	353.3	312.7	301.3	339.7	326.7	325.5	329.5	326.8
17-Jul-01	17:41:28	305.7	329.1	313.3	312.8	351.6	311.4	301.2	339.3	325.7	329.6	333.7	330.6
17-Jul-01	17:41:30	303.5	326.9	312.2	313.5	353.3	313.1	301.5	338.0	324.9	327.8	331.0	328.7
17-Jul-01	17:41:32	305.3	328.3	312.1	313.6	353.7	313.3	303.9	338.0	325.3	327.1	330.8	329.0
17-Jul-01	17:41:34	303.8	326.8	311.4	317.1	352.8	312.4	299.1	337.0	323.7	326.1	330.9	328.6
17-Jul-01	17:41:36	305.8	329.8	315.0	315.0	353.9	314.8	301.8	338.9	325.5	326.4	331.7	329.4
17-Jul-01	17:41:38	303.5	327.1	311.6	315.5	352.3	312.3	302.6	339.6	326.2	327.1	331.5	328.4
17-Jul-01	17:41:40	305.4	329.4	312.3	314.0	355.1	314.0	301.0	338.8	325.8	327.3	330.6	326.8
17-Jul-01	17:41:42	304.7	328.7	312.7	317.0	353.9	313.1	300.1	335.1	321.9	326.6	330.0	327.9
17-Jul-01	17:41:44	303.4	326.6	309.7	311.3	351.5	312.0	302.6	339.2	325.7	324.0	328.4	325.7
17-Jul-01	17:41:46	301.9	324.5	308.7	315.2	354.1	312.9	304.9	342.4	328.3	327.8	332.7	330.2
17-Jul-01	17:41:48	305.1	328.2	311.5	319.1	353.9	313.7	301.6	339.2	326.0	327.6	331.1	329.2
17-Jul-01	17:41:50	307.9	331.2	316.0	315.5	356.1	314.5	303.0	339.5	326.3	328.0	332.6	330.3
17-Jul-01	17:41:52	305.3	329.2	312.2	323.7	354.9	312.8	301.0	342.4	328.9	328.4	331.0	328.2
17-Jul-01	17:41:54	307.4	330.8	315.1	315.5	355.5	315.0	302.5	338.6	325.4	330.7	334.3	330.6
17-Jul-01	17:41:56	307.4	331.1	315.4	316.6	358.0	317.2	302.1	339.7	326.5	330.2	334.4	331.2
17-Jul-01	17:41:58	303.0	326.1	310.5	319.3	355.7	314.9	303.4	342.4	328.5	328.9	331.7	329.1
17-Jul-01	17:42:00	305.1	328.9	312.8	318.8	354.5	314.9	303.6	342.3	328.9	329.5	334.4	331.3
17-Jul-01	17:42:02	304.9	329.7	312.7	316.2	354.2	313.6	305.0	341.8	328.9	328.5	330.8	327.5
17-Jul-01	17:42:04	304.6	327.9	312.3	315.3	353.0	313.0	302.7	338.5	326.0	328.4	331.9	329.0
17-Jul-01	17:42:06	304.5	327.5	312.1	317.1	351.8	311.6	303.9	339.6	327.1	329.8	335.6	332.3
17-Jul-01	17:42:08	303.5	327.1	310.9	317.9	353.9	313.6	301.5	339.9	326.0	330.0	334.4	331.0
17-Jul-01	17:42:10	307.7	331.0	314.8	316.9	355.6	315.3	302.2	340.2	326.8	328.7	332.6	329.9
17-Jul-01	17:42:12	305.5	328.8	312.9	321.2	355.8	314.7	302.2	339.2	325.8	327.8	333.2	331.0
17-Jul-01	17:42:14	304.3	328.1	312.5	320.2	355.3	315.3	301.2	339.9	327.2	331.9	335.9	332.0
17-Jul-01	17:42:16	304.4	328.4	312.0	315.9	357.1	316.0	304.7	341.3	327.4	328.6	332.4	330.0
17-Jul-01	17:42:18	307.3	330.4	314.6	314.0	358.0	316.6	302.1	338.7	325.9	331.7	335.4	332.9
17-Jul-01	17:42:20	306.2	330.5	314.3	319.6	354.4	313.7	300.6	339.0	325.6	330.5	333.1	330.4
17-Jul-01	17:42:22	303.7	327.1	311.8	314.2	353.4	313.4	304.8	342.3	329.1	330.3	333.0	330.0
17-Jul-01	17:42:24	303.7	327.3	311.0	316.2	359.6	318.6	303.8	341.8	328.5	330.9	335.0	332.3
17-Jul-01	17:42:26	304.1	328.7	312.9	318.3	356.8	316.6	301.5	342.2	328.6	327.3	332.1	328.8
17-Jul-01	17:42:28	303.2	327.6	312.9	317.1	354.2	314.0	303.7	341.2	327.9	332.3	335.6	332.6
17-Jul-01	17:42:30	305.5	328.8	314.2	319.3	355.7	314.5	303.9	342.2	328.5	330.2	332.9	330.1
17-Jul-01	17:42:32	309.6	332.1	316.5	314.7	354.6	313.6	299.8	339.2	326.2	329.5	333.0	330.0
17-Jul-01	17:42:34	304.2	327.4	311.6	313.6	352.6	312.4	299.3	337.8	324.7	327.2	332.3	330.2
17-Jul-01	17:42:36	307.3	331.5	315.4	316.2	354.8	314.6	300.3	337.3	324.1	328.8	333.6	330.4
17-Jul-01	17:42:38	304.7	327.3	312.7	318.1	355.5	315.0	298.9	335.2	321.7	326.7	331.0	328.2
17-Jul-01	17:42:40	305.1	328.4	312.7	316.8	352.8	312.2	298.8	336.4	323.3	328.5	332.8	330.1
17-Jul-01	17:42:42	304.3	328.2	312.7	314.1	356.2	314.5	298.0	338.4	325.4	326.0	329.2	326.4
17-Jul-01	17:42:44	301.7	324.5	308.8	311.9	350.3	310.2	302.0	341.8	328.1	328.2	332.4	328.9
17-Jul-01	17:42:46	302.0	325.4	310.6	316.3	353.3	312.4	301.8	340.4	326.5	327.7	332.3	328.1
17-Jul-01	17:42:48	306.3	329.7	313.4	316.9	354.6	314.7	298.3	337.4	324.3	325.6	330.8	327.2
17-Jul-01	17:42:50	302.4	325.7	309.8	316.7	351.6	311.6	299.4	338.1	325.3	327.4	330.5	327.7
17-Jul-01	17:42:52	304.4	329.1	313.7	317.5	353.5	313.0	302.0	340.2	327.5	326.1	331.0	328.2
17-Jul-01	17:42:54	304.1	326.8	310.1	314.0	353.2	313.2	299.1	337.7	324.1	326.6	331.1	327.5
17-Jul-01	17:42:56	305.3	328.3	313.2	315.2	352.8	313.1	301.0	339.2	326.4	328.0	331.7	328.9
17-Jul-01	17:42:58	302.8	326.5	310.1	312.0	350.6	310.5	299.9	340.0	326.6	325.3	328.8	325.9
17-Jul-01	17:43:00	303.6	327.6	312.3	314.6	351.0	311.0	301.8	338.3	325.2	326.2	331.0	328.7
17-Jul-01	17:43:02	304.7	328.4	312.2	316.4	351.6	312.8	304.2	341.8	328.0	326.6	331.1	329.0
17-Jul-01	17:43:04	305.0	328.6	312.9	316.6	350.8	311.4	300.3	339.2	325.6	328.3	332.2	328.8
17-Jul-01	17:43:06	302.6	326.9	309.9	315.3	353.6	313.7	302.0	339.9	326.4	328.3	333.1	329.8
17-Jul-01	17:43:08	303.4	327.9	311.3	314.5	350.7	310.5	299.2	337.7	324.2	326.4	330.4	328.1
17-Jul-01	17:43:10	306.3	328.9	312.8	315.9	354.2	314.1	300.8	337.3	323.9	325.6	329.1	325.8
17-Jul-01	17:43:12	307.8	331.0	315.2	313.8	348.9	309.4	300.1	338.3	324.6	326.7	331.9	329.2
17-Jul-01	17:43:14	303.7	326.1	310.8	313.4	349.0	309.6	300.6	337.7	324.1	326.5	330.0	327.2
17-Jul-01	17:43:16	303.1	326.4	310.0	314.8	350.2	310.1	299.8	338.1	324.9	325.9	329.6	326.8
17-Jul-01	17:43:18	302.4	326.5	310.2	312.6	355.8	315.0	299.0	338.0	324.2	327.7	331.1	329.0
17-Jul-01	17:43:20	303.0	326.7	311.6	317.4	355.3	314.6	299.4	337.9	324.5	330.2	334.2	330.7
17-Jul-01	17:43:22	303.6	327.7	312.0	316.0	354.5	313.7	301.8	339.2	325.9	327.8	331.8	328.8
17-Jul-01	17:43:24	304.8	329.0	313.5	313.8	355.1	315.3	300.1	340.8	327.2	325.4	330.4	327.7
17-Jul-01	17:43:26	302.8	326.2	310.7	313.1	350.1	310.3	300.3	338.3	325.2	328.3	332.0	328.7
17-Jul-01	17:43:28	306.1	329.6	314.7	315.8	349.3	309.6	302.8	336.9	323.2	323.9	329.0	326.6
17-Jul-01	17:43:30	304.2	327.7	310.8	314.8	353.7	313.0	300.1	335.9	322.9	325.9	331.4	328.5
17-Jul-01	17:43:32	306.8	330.3	314.2	314.5	356.1	315.2	301.7	339.5	325.8	328.5	331.7	329.3
17-Jul-01	17:43:34	303.7	327.9	311.8	315.2	356.4	315.7	299.2	336.2	323.2	326.2	330.8	328.4
17-Jul-01	17:43:36	303.8	327.0	311.0	313.3	350.5	309.9	300.0	337.1	323.8	325.5	330.1	327.3
17-Jul-01	17:43:38	305.7	329.1	312.3	313.0	353.7	313.4	302.6	339.5	326.5	325.8	329.1	327.8
17-Jul-01	17:43:40	305.1	328.4	312.8	314.4	350.5	311.0	303.9	342.7	329.3	328.6	331.9	328.8
17-Jul-01	17:43:42	303.1	325.7	309.9	316.2	354.2	314.9	300.9	339.0	325.6	326.3	330.2	327.8

Table 3
Catawba Unit 2 Loop Elbow Tap ΔP Data

17-Jul-01	17:43:44	303.1	326.8	310.7	311.2	352.8	312.8	298.4	335.2	321.7	327.8	332.0	329.6
17-Jul-01	17:43:46	302.4	326.5	311.3	312.9	353.5	313.1	300.6	336.8	323.2	326.6	331.0	328.6
17-Jul-01	17:43:48	304.6	327.4	313.0	314.7	351.7	312.1	301.3	337.1	323.7	325.3	328.9	326.1
17-Jul-01	17:43:50	306.1	329.4	313.1	315.5	354.7	314.2	303.4	338.9	324.7	328.9	333.2	330.2
17-Jul-01	17:43:52	303.8	326.8	311.5	313.4	350.5	310.9	300.4	337.5	324.0	326.9	330.6	329.0
17-Jul-01	17:43:54	305.0	328.3	312.1	315.0	352.9	313.0	300.8	338.4	324.5	326.9	331.7	328.0
17-Jul-01	17:43:56	304.3	327.9	313.1	318.3	355.5	314.9	300.2	338.0	324.9	326.4	329.8	326.6
17-Jul-01	17:43:58	300.4	323.8	309.4	318.5	355.2	314.3	300.0	338.7	325.2	330.4	335.3	332.7
17-Jul-01	17:44:00	303.7	327.6	311.1	313.8	349.7	309.8	299.1	336.4	323.3	325.8	330.9	328.2
17-Jul-01	17:44:02	301.7	324.5	309.0	313.9	352.3	312.9	301.1	340.0	326.8	327.5	329.6	327.2
17-Jul-01	17:44:04	302.8	325.4	310.1	316.0	355.8	315.3	301.6	339.9	326.1	325.2	330.4	327.2
17-Jul-01	17:44:06	306.9	330.3	313.5	313.9	352.5	310.8	302.7	339.5	326.6	327.7	330.8	328.2
17-Jul-01	17:44:08	307.5	330.7	315.3	315.4	351.4	311.7	302.1	338.5	325.4	328.6	332.5	328.6
17-Jul-01	17:44:10	304.2	327.0	310.4	313.9	351.8	312.2	300.3	337.7	324.4	327.3	330.9	327.9